THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

VOL. CIX.—No. 3802. DECEMBER 17, 1915.

FORM AND COLOUR.

IN his work on "Form and Colour"* Mr. March Phillipps defines the two great schools to which he says the art of every age and country belongs, and which he describes as being either intellectual or emotional in character, form being the expressive vehicle for intellectual expression and colour that of emotional expression. He begins by tracing the analogies between the two forms of expression in Nature, in whose manifestations the same differences occur. Wherever forms are clearly visible the intellectual faculties of recognition and observation are kept active and alert; but where, on the contrary, as in the depths of a wood, forms are merged in colour, light and shade, mental activity dies, and the very absence of recognisable objects opens the way for a mood of spiritual sensibility. He is careful to define what he means by the use of colour in a dominating or a secondary capacity. Colour may be freely used to define and accentuate form, as it was by the Greeks and the Pre-Raphaelite painters, but, though strong and brilliant colours were so employed, they are only subordinate factors and form remains dominant. On the other hand, though the painters of the Venetian School used more subdued colours than many earlier artists, we feel that form has become a secondary matter compared with colour and chiaroscuro, and this secondary use of form Mr. Phillipps also sees in Byzantine architecture. To him Greek architecture stands for the extreme expression of form, and the architecture of the Byzantine churches for that of colour, the one being the outcome of the Western mind, the other the expression of the East. We do not agree with Mr. Phillipps in saying that because mosaic is used in the Byzantine style as a complete covering of the wall surface it is used "structurally." We should rather put it that the exigencies of its decorative use rendered a number of confining structural lines and mouldings inappropriate, which is quite another thing; nor are we inclined to admit that form is less important in a Byzantine design than in any other style, because it lends itself to the appropriate use of coloured surfaces as decoration.

Although it is generally true that we associate the East with colour rather than with form, with the expression of emotion rather than with that of intellectual reason, we think the author goes too far in the conclusions which he draws. He very truly points out that the Hindu seeks truth by means of introspection and abstraction, and the Aryan by means of investigation and research, and that, as art is a product of life, this fact must have its bearing on the art of the two races. The constructive skill of the great mediæval builders has no counterpart in the architecture of Hindu India, since it involved a use of scientific methods alien to a more contemplative race. In the same way the art of figure delineation which grew up in the West was the result of a search after truth which had no parallel among Hindu artists. Had the nations of the West been contemplative rather than restless, dreamers rather than investigators, it is possible that we might now be erecting replicas of the buildings of the tenth century or any anterior date we might mention. In this respect the habits and temperament of races must affect their architecture; but we see no proof in fact of Mr. Phillipps's theory that in the East form is usually subordinated to colour, or that some of the uncouth shapes and proportions of the architecture of the East are due to the relatively greater value given to colour. We should rather say that the races which were more inclined to speculation and abstraction than to intellectual investigation and research were not likely to make such advances in the more constructive and scientific arts, and that the result of that stagnation would be expressed by immaturity of thought and expression.

As Mr. Phillipps very truly says, the Western mind has always declined to surrender itself to purely abstract thought, and, by declining to do so, has made progress possible in those directions in which constant experiment and effort were primarily necessary. On the other hand, the habit of generations of thinkers has made it possible for the Eastern mind to habituate itself to abstract conceptions which can only be dimly understood by the educated Western mind; and education in China for official posts has mainly consisted of the mastery of the sayings of Confucius instead of what in the West would be considered germane and necessary in similar cases. The relative values given to different human activities by other races and civilisations seem to us far more likely to affect the character of their art than mere temperament, whether it be emotional or intellectual, though temperament has undoubtedly led to the mental effort or its negation in favour of reflection.

We therefore hold that the difference between the arts of the East and West is that the one represents not so much a disregard of form because it fails in emotional appeal, but the expression of a more primitive stage of æsthetic and constructional development due to the fact that the Oriental mind is more interested in abstract introspection than in the more logical and intellectual processes of synthesis and analysis of structure on which progressive advancement in the arts must be based. The East may be said to have reached its maturity in philosophical thought while its art remained primitive.

The author argues that Christian or mediæval art was largely tinged with emotion, and that the flaw in mediæval life and art consisted in the insufficient intellectual development of the period, while in the Renaissance the intellectual idea was vigorously pursued and the emotional one dropped. This may be true to the extent that the mediæval Church occupied a far greater place in the national life than it has done before or since, and consequently that on the fabric of the church and the representation of religious scenes with which it was adorned the skill and efforts of artists and craftsmen of the time were concentrated as they had not been before or afterwards; but we doubt whether it is true in any other sense. The multiplication of the interests of life in the Renaissance period, the growth of wealth and labour-saving methods, and the diffusion of knowledge were bound to affect the forms and expression of art; but we do not think with Mr. Phillipps that architecture has suffered so much from the loss of emotional qualities as from the indifference and ignorance of architects and the public they have worked for—an indifference and ignorance harder to make good in a wider and fuller world than in that of past ages. Art has become more difficult under modern complex conditions, and it remains to be seen whether we can ever completely make good what the world has lost by the partial obliteration of the trained craftsman; while in the field of religious art it can hardly be expected that the intense realism based on imagination of earlier and ruder ages can ever be recovered. But whatever the future of architecture may be, form and colour will always be the two elements of which design is composed, and Mr. March Phillipps has performed a useful task in reminding us of the dual appeal which they make to our senses, and in endeavouring to define the nature of that appeal, even if we cannot agree with him in recognising the sharp-cut differences which he sees in the estimation in which East and West hold form and colour.

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* "Form and Colour." By L. March Phillipps. (London: Duckworth & Co. 7s. 6d. net.)

NOTES.

British Timber.

ONE of the most serious questions at the present time is the great growth of imports and their excess over exports, and among the important items in the list is timber, for nearly all the timber used in building is grown abroad. This is due not only to the systematic growth of foreign timber, but to the organised manner in which its sale has been pushed in this country, and Mr. Duchesne, in the paper the first part of which we publish on p. 437, explains that there is no reason why we should not by system and organisation largely meet our own wants. The President of the Board of Agriculture (Earl of Selborne), in opening an exhibition organised by the English Forestry Association to illustrate Mr. Duchesne's paper, emphasised the same points, and said that what was required was the organisation of the English woods and plantations as Sir Horace Plunkett had organised dairy and farm products in Ireland. The subject is one of the greatest importance both to the building trades and to the commercial interests of the country, and we hope effective measures will be taken to utilise to the full our natural products.

Building Contracts and the War.

A DICTUM of some importance, and having an indirect bearing upon the building trade, was given by Mr. Justice Shearman in the case of Greenway Brothers, Ltd., *v.* S. F. Jones & Co. (the *Times*, December 13). The case was for breach of contract to deliver certain spelter, but the contract contained a clause, "Delays *en route* or other contingencies beyond our control to be sufficient excuse for any delay traceable to these causes," and one of the defences to the action was that the outbreak of war relieved the defendants under that clause. The case was decided in the plaintiff's favour on another ground, that the defendants, despite the war, might have procured spelter elsewhere to fulfil their contract, although they might have had to pay more for it; but in the course of his judgment the learned judge is reported as having said that the difficulty was to construe this clause, which was known as "the strike clause," and was common in charter-parties, but which had lately been adopted in building contracts, and now was being incorporated in contracts for the sale of goods. The judge then expressed the opinion that the outbreak of war was a contingency within the contemplation of the clause. This expression of opinion is of importance to the building trade, but it must be remembered that, as it was not essential to the decision delivered, it is *obiter* and has not the authority of a judicial decision.

The Present and the Future.

THE *Times* does well to remind us that what we have to do is to win the war and not divert our thoughts to overmuch consideration of what will follow when peace is declared. In deploring the latter tendency, it says:—"One of the chief preoccupations now troubling people is the supposed state of trade which is to follow the war. The notion that seems universally prevalent is that the war will come to a sudden end, which will precipitate us into a state of frightful economic depression, with widespread destitution and misery. Not a day passes without some reference to this prospect as a foregone conclusion; and the managers of the National Relief Fund, in the teeth of their solemn protestations that the money should not be hoarded, are, nevertheless, actually and avowedly hoarding it in anticipation of this imaginary state of things." We agree with the *Times* that this state of things is purely imaginary, and that a lesson might be learnt from our previous miscalculations as to the effects the war would produce. A state of frightful economic depression is by no means a foregone conclusion, and should not be taken for granted by the administrators of the National Relief Fund. This fund was started to alleviate the distress caused by the war, and not that caused by the peace which will follow it. If there was no distress caused by the war it might be reasonable to hoard the money in case it was wanted on the conclusion of peace. But there is distress among the brain-workers and the educated classes of the country. Among them the bulk of the money should be distributed now, and not kept to deal with a purely hypothetical situation which may or may not arise among the class with which relief measures are more generally associated.

Bath.

THE war has been useful in impressing on the travelling public who seek foreign waters that the Jordan is as health-giving as the rivers of Damascus, and Bath, among other inland watering-places, is enjoying a spell of greater prosperity. The Pump-room has been decorated and re-opened, and is now appropriately furnished, and recalls the eighteenth-century traditions of Bath. We understand that the city at the outbreak of war had under contemplation improvements the carrying out of which would enable it to hold and maintain a much more important position as a watering-place than it has held since the great days of Beau Nash, and it is to be hoped that these schemes will become actualities before many years have elapsed. Money spent on a health resort is justified by strictly utilitarian considerations, and leads to the expenditure of other money within the country which would otherwise be dissipated abroad; and this will be a greater consideration after the wastage of capital arising out of the present struggle than it ever has been before.

The Carpenters' Company Schools.

THE Carpenters' Company are pursuing under difficulties the useful and important work they have been engaged upon for so many years, and while their Trades Training School has contributed its quota to the war, there have yet remained a hundred and twenty students to profit by the teaching given in the Company's Technical Schools. It is fortunate that while Major Phillips Fletcher has left his duties to serve his country, his brother, Mr. Banister Fletcher, has been able to successfully carry on his work, and the reception accorded to him at the annual prize-giving on Monday shows how admirably he has succeeded in filling the breach. Sir Thomas Graham Jackson made an excellent speech, in which he emphasised the importance of craftsmanship in connection with the building trades. Now that the old apprenticeship system is no longer the rule but the exception, the work of the various technical training schools is of greater importance than ever, since it affords the best, if not the only, means by which workers can master the higher branches of their crafts. No institution in the country has done more and better work for the objects for which it was founded than the Carpenters' Company, which has proved itself as useful in this century as it was in the past.

The Twenty-One Gallery.

AT the Twenty-One Gallery, York-buildings, Adelphi, an exceedingly interesting collection of paintings, lithographs, and woodcuts are now on view, comprising works by Mr. Cecil French and Mr. Charles Shannon, A.R.A. Mr. French's subjects are cleanly and firmly executed, and show both imagination and high decorative qualities. Among the most noteworthy are No. 11, "The Rose of Dreams" (lithograph); No. 12, "Dawn" (oils); No. 13, "Morning" (tempera); No. 15, "The Hill of the Titans" (tempera). Mr. Shannon's work consists of a number of lithographs and woodcuts which will be a delight to his many admirers, all being figure studies. The whole collection only numbers thirteen, but every one is of interest. We especially like No. 8, "The Incoming Tide"; No. 10, "With Viol and Flute"; and No. 13, "The Sea Coast."

The Goupil Gallery.

A SMALL but interesting exhibition of the work of Mr. Marten van der Loo is on view at the Goupil Gallery, consisting of a number of Belgian and English views, mostly in the form of etchings or pen-and-ink studies. Among the most interesting we noticed No. 26, "La Grande Place, Malines"; No. 28, "Old Houses, Tichelerig, Ghent"; No. 26, "Old Quay, Lierre"; and a dry point etching of a flood at Turvey, No. 33, all of which are colour etchings. No. 37, "Destruction of the Cloth Hall, Ypres"; No. 38, "A Flemish Mill"; and No. 42, "An Old Quay at Lierre," are among the black-and-white etchings on view, and Mr. van der Loo also exhibits a number of vigorous pen-and-ink drawings, including many subjects from Hampton Court and King's Lynn.

Economy and Direct Labour.

WILL labour embrace Theosophy as a doctrine? It would seem that it should do so out of sheer gratitude for the treatment meted out to it. The new headquarters of the Church in Bloomsbury is now being carried on by direct labour, the contractor having been dispensed with at the time of the building lock-out. Originally estimated at £40,000, the new buildings are stated to be costing £200,000, and all difficulties are said to be removed, as a wealthy Theosophist has come forward and agreed to provide the necessary funds for completion—we may state that the works have been in progress for some three and a half years. If Theosophists would only provide funds for the completion of other buildings delayed by difficulties of finance occasioned by the war we might find statistics for a statement of cost to run as follows:—Ordinary cost of buildings under contract system plus extra cost of direct labour equals sums advanced by Theosophists; and an analysis of results would show whether the game had really been worth the candle. If the contractor were eliminated the public would learn by bitter experience that he had always been a benefactor in disguise.

THE SURVEYORS' INSTITUTION.

AN ordinary general meeting of the Surveyors' Institution was held on Monday at No. 12, Great George-street, Westminster, S.W., Mr. John H. Oakley (Vice-President) presiding.

The minutes of the previous meeting were read and confirmed.

It was announced that six publications had been presented to the Library and also one donation of two guineas, and it was agreed that the thanks of the Institution be sent to the donors.

ENGLISH TIMBER: BEFORE, DURING, AND AFTER THE WAR.

Mr. Martin Collier Duchesne (Fellow) then read a paper on "English Timber: Before, During, and After the War." After a few words of introduction, he said:—

"Without wishing in any way to discount its awfulness, we may urge that the war has also furnished some very valuable lessons. The very least we can do is to take these lessons to heart and to keep them well before the public. I think everyone will admit that the greatest lesson it has taught us is the importance of organisation in military, commercial, and national affairs. In this paper I wish to emphasise once more the importance of the organisation of our native timber supplies. I hardly need remind you of the strangely anomalous position of our native timber. Although we have one of the largest markets in the world in our midst, in some cases with tempting prices ruling, the demand and prices offered for our native oak—admittedly the best in the world—are extremely poor. It is a ridiculous fact that there are instances of English oak being sold as "Austrian oak," and our best Scots pine as "best foreign reds." Another curious anomaly is that, though architects and others in London wish to specify English oak for panelling and other work in building, scarcely a merchant in London is interested in pushing the sale of English oak for these purposes, so well organised and far-reaching is the marketing of foreign oak. Stranger still, although every one admits the unsatisfactory nature of the position, no one suggests any remedy, and whoever makes an effort to improve matters experiences in many quarters not merely apathy but even hostility. Much of the apathy and opposition to new proposals, however, is due to a failure to grasp exactly what these proposals are, and also a failure to appreciate fully the position into which we have drifted.

Changes in Markets for Timber.

It is difficult to make people realise how greatly our markets for timber have changed during the past forty years. Before this period, with almost the sole exception of oak for the Navy—which was then one of the only "wide" markets, but whose exact requirements were known to all—our timber was sold to the local timber merchant mainly for his local trade, and was converted for the requirements of the local builder, wheelwright, and other local tradesmen.

It is common knowledge that foreign timber has displaced native for nearly all local purposes. Timber used for building is now almost all foreign, and American spokes are purchased even by local wheelwrights, much of whose trade, however, has passed to the large firms of agricultural implement makers. It naturally follows that the proper markets now for our timber are with these large firms and in the large industrial centres.

It follows also that with new markets we must adopt new methods of marketing. The old methods, which mght have been quite satisfactory formerly and under old conditions, may be quite unsuited to present-day requirements. Methods and practices suitable for marketing oak for the Navy, for local tradesmen, or for small consumers require considerable alteration when one has to deal with the different classes of purchasers who now consume the timber. We now have large consuming firms who are fully informed as to the foreign supplies and are able to take fuller advantage of these in competition with the native timber. In the rush of modern business they are not prepared to take the same trouble in securing distributed supplies as were the old local consumers.

The existence of much-advertised and easily-obtainable foreign timber makes it to-day more important than ever to cultivate the customer and to market the timber in the form and character that he requires so as to save him trouble. Modern machinery and modern methods of conversion necessitates methods of marketing quite different from those prevailing in the days of the old hand-sawyer.

It must follow also that with wider markets we must have wider knowledge of these markets and their requirements and how to supply them. We must also grasp the commercial uses of timber, and know the special properties, advantages, or weaknesses of the different classes, and how far our native supplies can compete with foreign. Foreign timber has the great advantage of organised marketing on a large and up-to-date scale, and the backing of concessionaires and even Governments, who spend large sums in advertising and pushing sales by every means possible. In many cases cheap transport and other facilities or properties possessed by a particular class of foreign timber render it impossible to compete with such timber for various purposes. Moreover, many of the finer foreign timbers, such as mahogany or teak, are eminently suitable for special trades, so that it would be obviously absurd to compete with them. But in the case of oak, ash, beech, elm, larch, etc., there are unlimited markets for which our native trees are even more suitable than imported trees of the same species. To improve the demand and prices for these native timbers it is therefore necessary to organise the marketing to reduce expenses, and especially to render the timber readily obtainable by the consumer in the quantity, size, and nature required. Native timber must be as easily procurable as are the well-organised foreign supplies. We must also copy the foreigner, and advertise and push the sale of our timber, using our influence to ensure that where it is suitable and available for a purpose it shall be specified, and educate the consumer as to its valuable properties. I do not say we need emulate the American who, by inference, often suggests qualities which his goods cannot possibly possess. But we can quite honestly emphasise those valuable properties of our native oak and other timbers so universally recognised before the invasion of the foreign, and still admitted by experts. Unlike many untried or newly-introduced foreign timbers, our native woods have stood the test of centuries.

Imports and Prices of Foreign Timber.

In support of my contention that there are larger openings than ever for all the native timbers that we can offer, I give figures of the imports and prices of foreign timber.

Few people appreciate the promising factors of the present time, notably the increase that has taken place in the price of foreign timber and imported wooden articles during the past thirty years concurrently with a decrease in quality. Experienced men admit that what was once "third quality" is now at least "second" if not "first quality" in many varieties of foreign timber."

[The continuation of this interesting paper will be given in our next issue.—ED.]

IMPORTS OF FOREIGN TIMBER.

	1871.	1885.	1900.*	1913.
Wood and Timber: Hewn.	£	£	£	£
Fir and Pitwood (not separated till after 1900)	—	—	4,299,518	(5,843,651)
Fir, other than Pitwood	—	—	?	1,398,585
Pitwood	—	—	?	4,445,066
Oak	—	—	1,018,829	1,736,061
Teak	—	—	786,066	879,254
Unenumerated	—	—	358,312	384,578
TOTALS	£4,682,165	£4,632,175	£6,462,725	£8,843,544
Wood and Timber: Sawn or Split, Planed or Dressed.				
Sawn Fir	—	—	17,856,360	20,181,033
Sawn unenumerated	—	—	829,999	853,602
TOTALS	£6,512,226	£9,587,601	£18,686,359	£21,034,635
Staves of all dimensions	606,854	588,971	721,850	1,000,048
Furniture Woods, Hardwoods, and Veneers.				
Mahogany	280,134	486,193	827,520	1,225,879
Unenumerated	—	—	1,177,459	1,684,778
TOTAL OF WOOD AND TIMBER, ALL SOURCES	£12,081,379	£15,294,940	£27,875,913	£33,788,884
TOTAL FROM FOREIGN COUNTRIES	—	—	20,939,328	28,298,622
TOTAL FROM BRITISH POSSESSIONS	—	—	6,936 585	5,490,262
	£12,081,379	£15,294,940	£27,875,913	£33,788,884

* Speculating building boom.

PRICES PAID FOR IMPORTED TIMBER, IN DOCKS OR AT WHARF, REDUCED TO CUBIC FOOT BASIS (SAWN SQUARE).

	1883.	1900.	1913.	1915 (War Prices).
	s. d.	s. d.	s. d.	s. d.
3″ × 9″ 1st Archangel Yellow or Red Deal (Scotch)	2 1½	2 6½	2 10	3 10
Do. 2nd do. do.	1 8	2 2½	2 4½	3 5
Do. 3rd do. do.	1 3	1 8½	1 9½	3 0
Do. 4th do. do.	0 11½	1 5½	1 6½	2 6
3″ × 9″ 1st Petersburg White Deal (Norway Spruce)	1 2½	1 8	1 10	2 11
2″ × 4″ unsorted Swedish Yellow Deal	1 0	1 2½	1 4½	2 7
3″ × 2″ Slating and Tiling Battens (Scotch or Norway Spruce)	—	1 1½	1 3	2 5
3″ × 1″ do. do.				
Rough hewn (square) Fir Balk 5″ to 8″ square do.	1 0	1 3	1 6	2 3
Christiana and Petersburg Poles do.		1/4 to 2/- each.	3/- to 4/6 each.	
Planed Flooring Boards—				
1″ × 6″ 2nd Yellow (Scotch)	1 1½	1 4½	1 7	2 7
Do. White (Norway Spruce)	1 0	1 3	1 5½	2 6
3″ × 9″ 1st Canadian Yellow Pine (Weymouth Pine)	2 9	3 3	4 4½	5 6
Do. 4th do. do.	1 4	1 4	1 9	2 4
Do. 2nd Canadian Red Pine (*Pinus Resinosa*)	1 2½	1 11	2 0	2 8
Do. 2nd Canadian Spruce (*Pinus Alba*)	1 0	1 4½	1 7	2 8
Silver Spruce Planks (Oregon) (Sitha Spruce)	—	—	4 0	7 0
Oregon Pine Planks (Douglas Fir)	—	1 10	2 4	3 6
Pitch-Pine Planks and Boards (*Pinus Palustris*)	2 0	2 3	3 0	3 9
Pitch-Pine Floated Logs (*Pinus Palustris*)	1 0	1 6	2 6	3 4
American Canary Whitewood Boards (Tulip-Tree)	—	3 6	4 9	6 0

GENERAL NEWS.

The Victoria and Albert Museum.

The Victoria and Albert Museum will be closed on Christmas Day. From Sunday, December 26, 1915, to Sunday, January 2, 1916, inclusive, the hour for closing will be 5 p.m. instead of 4 p.m. daily; the hours of opening will be as usual.

Church of St. Bartholomew the Great.

We understand that the monument under which rest the remains of Sir Walter and Lady Mildmay at the church of St. Bartholomew the Great is, as a precautionary measure in view of air raids, being protected through the generosity of descendants and the Governing Body of Emmanuel College, Cambridge.

Luminous Paint for Lighting Streets.

It is stated that the Gas Committee of the Chesterfield Corporation have agreed to try an experiment with luminous paint on some of the gas-standards where the light is extinguished, to see if it will help pedestrians to better negotiate the darkest places. Sides of the pavements are also to be painted white.

Economy on the Railways.

It is stated that several of the smaller railway offices and stations in London and large centres will be closed, and the abolition of positions will undoubtedly bring about a reduction of staff. The suggested pooling of collecting work and the institution of central offices in each large town are being considered.

Houses for Coventry Munition Makers.

A special meeting of the Plans Committee of the Foleshill Rural District Council was held on the 9th inst. further to consider the plans of the Coventry Corporation scheme providing 600 houses in the parish of Wyken for munition workers. It was stated there was an urgent request from the Minister of Munitions that the plans should be dealt with immediately, in order that the work might be proceeded with. The Committee, taking the Minister of Munition's request into consideration, decided to recommend the District Council to pass the plans, although, it was said, they were not strictly in accordance with the by-laws.

Glasgow Tolbooth Steeple.

At a meeting of the Special Sub-Committee of Glasgow Corporation on the Tolbooth Steeple it was reported that, at a meeting with the Commissioners of His Majesty's Office of Works, the latter body suggested that, having regard to the present state of the country, consideration of the proposal to remove the Tolbooth Steeple should not be proceeded with in the meantime, and that the Corporation should, under reservation of the rights of all parties, withdraw their notice of November 17, in which they adhered to their previous decision to remove the steeple. The Sub-Committee agreed to recommend that the suggestion of the Commissioners be adopted, and that the removal notice given by the Corporation on 17th ult. be meantime withdrawn.

The Scottish Royal Housing Commission's Visit to Edinburgh Properties.

The members of the Royal Commission on Housing (Scotland), under the guidance of Dr. A. Maxwell Williamson, Medical Officer of Health, and Mr. A. Horsburgh Campbell, Burgh Engineer, have visited various properties in Edinburgh—namely, Well-court, Dean Park-buildings, Convening-court, Glenogle-road, Bedford-crescent, Milne's-court, Cowgate, Tron-square, Arthur-street, East Arthur-place, St. James-street, Greenside-row, and Greenside-end. At these places there were seen various types of buildings erected by the Corporation and reconstructed by them, and also those erected by private enterprise.

Builders' Merchants' Alliance.

From the annual Report of the Institution of Municipal Engineers we take the following:—A deputation from the Builders' Merchants' Alliance, Ltd., regarding uniformity of tenders in the case of sanitary pipes and oddments was received by the Council. The deputation consisted of representatives of Messrs. Doulton & Co., J. Sutton & Co., Geo. Skey & Co., Wm. Ashby & Son, Ltd., John Knowles & Co. (London), Ltd., and Sankey & Co., with Mr. W. H. Falcon, Secretary of the Midland Pipe Association, and Mr. G. Le Gros, Secretary of the Builders' Merchants' Alliance, Ltd. Mr. Walter Reed, of Messrs. Knowles & Co., stated the case for the Alliance. In thanking the deputation for their attendance, the Council stated that they were prepared to approve the principles put forward, subject to the standard list being published as "The Pipe Manufacturers' Standard Price List," or some similar title that would render the list universally identifiable.

War Memorials.

The necessity for some proper co-ordinated scheme in the erection of war memorials has been emphasised to a *Daily Graphic* representative by Professor W. R. Lethaby. "This is a movement," he said, "which should go forward very gently and slowly, and should attempt nothing revolutionary. There are a great many people who the moment the word 'art' is mentioned regard it as something altogether dissociated from everyday life. The word has a very big A, and is entirely to do with picture-galleries, and in some degree, they think, with cold classical things which can have nothing to do with domestic life. That is a misconception which should be removed at all costs. Call it 'tidiness' or 'order,' and you get the real appreciation of the word. London, and indeed most great towns, want tidying up and making more orderly. In doing that you beautify them, make them more artistic and more congenial to the best work, the best health, and the happiness of all. There are two cities which occur to me. Aberdeen and Edinburgh are more orderly and tidy than London."

The Society of Engineers.

At the annual meeting of the Society of Engineers, held at Victoria-street, on Monday, under the Presidency of Mr. Norton Scorgie, it was reported that the President's Gold Medal had been awarded to Mr. Arthur H. Barker, the Bessemer Premium to Mr. Alphonse Steiger, and Lacy Premiums to Mr. Sydney G. Turner and Mr. Frank Groves. Mr. Percy Griffith was elected President. The Secretary reported a membership of 588, with eighty-three affiliated members. About fifty were on active service, and many more engaged on miscellaneous war work as befitted engineers, when the result of the war depended so largely on engineering science. With regard to the effort of the Society to improve the status of professional engineers of all classes considerable progress had been made in the preparation of a comprehensive scheme dealing with the professional qualifications, fees, and etiquette of consulting engineers. Consideration was also being given to the position of salaried engineering officials, particularly those employed by municipal and similar bodies. The Council welcomed information which would assist them in accomplishing their object.

Artists' Rifles O.T.C.

The officer commanding the second battalion of the Artists' Rifles Officers' Training Corps has decided to form a special company to consist mainly of professional men whose technical experience renders them qualified for appointment as officers to those units or branches of the Army in which knowledge of construction and civil engineering is especially useful in the conditions obtaining in modern war. A large number of men have already been enrolled, but there are still vacancies for civil, mechanical, and mining engineers, architects, public works surveyors, and borough engineers to receive the military training which is essential if the military authorities are to make full use of their professional skill and experience. The scope of the training will extend beyond ordinary field engineering, and will be both of an individual and collective character. It will include engineers' reconnaissance, building and repair of bridges and roads, work in connection with embarkation and disembarkation of troops, military sanitation and water supply, the construction of defensive positions, animal management, and such other instruction as is necessary to render the candidate for a commission a thoroughly efficient officer. Application for nomination to the Corps should be made to the Headquarters, Artists' Rifles O.T.C., 7, Duke's-road, Euston-road, W.C.

The Royal Academy Schools.

Sir Edward Poynter, presiding on the 10th inst. at the distribution of prizes at the Royal Academy Schools, said it had been thought advisable, for the first time since the foundation of the Royal Academy 144 years ago, to suspend the competitions for gold medals, carrying with them the Travelling Studentships in the three arts of Painting, Sculpture, and Architecture. No fewer than 134 of their past and present students, of whom fifty-five were painters and sculptors and seventy-nine were architects, had joined the Colours. So many students in sculpture and architecture had left that the architectural schools had been closed for the duration of the war, and the same course had been taken in regard to the day classes in the model school. Ten lady students had sacrificed their profession and engaged in hospital, Red Cross, or munition work. One of their most promising students, who gained the gold medal a few years ago, and five others connected with the Academy, had been killed in action.

Public Health Acts (Building By-Laws) Amendment Bill.

We take the following from the Report of the Council of the Institution of Municipal Engineers:—This Bill received the careful consideration of the Council and of the General Purposes Committee, and at the meeting held on November 25 the following resolution—a copy of which was sent to the Local Government Board—was unanimously passed:—"That this Council of the Institution of Municipal Engineers view with concern the proposed introduction of undue and unnecessary elasticity into the operation of building by-laws, and are in the strongest opposition to the Public Health Acts (Building By-laws) Amendment Bill. The erection of buildings in rural districts with any kind of material, and the possible extension of this concession to boroughs and urban districts, will in effect operate to the detriment of the districts affected. The Memorandum to the Bill says, 'Above ground a man will be free to build as he likes, so long as he does nothing contrary to purposes of health,' and it is felt that these statements are in direct contradiction the one to the other. The only good point in the Bill is the discouragement of the crowding together of cottages, but this is provided for in existing Acts. The Council foresee that if the Bill becomes law the important and very necessary work of the building inspector in rural districts will practically cease."

British School at Rome.

The annual meeting of subscribers to the Faculty of Archæology, History, and Letters of the British School at Rome was held on the 7th inst. in the rooms of the Society of Antiquaries, Burlington House. Professor J. S. Reid presided and presented the Report. The war, he said, had naturally caused a great diminution in the students and Associates attending the School, so that they numbered fourteen only. During the past year the Director, Dr. Thomas Ashby, visited Australia with the British Association, and he had also spent some time in Malta, excavating a small megalithic building of the Neolithic period at Debdieba and a megalithic sanctuary at Xorb il Ghargin. Both these excavations had been undertaken at the expense of the Maltese Government. He also explored two rock fissures near Mkabba. Subscribers to the Faculty were aware that their new school building in Rome, which was now approaching completion, in the Valli Giulia, was under the control of the Executive Committee, and had been built by them from funds at their disposal. Mrs. S. A. Strong, Assistant Director, read a paper on the work of the Faculty of Archæology in Rome, which, she said, had been mainly centred on the second volume of the Catalogue of Sculptures in the Municipal Collections of Rome. She expressed the hope that England would take the lead in a great intellectual movement for the rehabilitation of Latin archæological study.

ROYAL ACADEMY SCHOOLS:
LIST OF PRIZES AND PRIZE WINNERS, 1915

LANDSCAPE PAINTING—"Dawn," Turner Gold Medal and Scholarship (£50), Harold Williamson.

Landscape Painting—"A Rickyard," Creswick Prize (£25) and Silver Medal, Sylvia Ellen Gauntlett; *prox. acc.*, Una Hook.

Design for the Decoration of a Portion of a Public Building—"The Triumph of Peace," First Prize (£30) and Silver Medal, not awarded; Second Prize (£10) and Bronze Medal, James Pollard; *prox. acc.*, Florence Mary Asher.

Design in Monochrome for a Figure Picture—"The Raising of Lazarus—St. John, xi. 43, 44," Armitage Prizes, First (£30) and Silver Medal, not awarded; Second Prize (£10) and Bronze Medal, Agnes Clara Tatham.

Composition in Colour—Silver Medal, no competition.

Cartoon of a Draped Figure—"Pandora," Prize (£20) and Silver Medal, Dorothy Fraser Litchfield.

Two Paintings of a Figure from the Life—First Prize (£10) and Silver Medal, Florence Mary Asher; Second Prize, Bronze Medal, Marjory Florence Mostyn.

Two Paintings of a Head from the Life—First Prize (£5) and Silver Medal, not awarded; Second Prize, Bronze Medal, Dorothy Fraser Litchfield.

Perspective Drawing in Outline (open to Painters and Sculptors only)—"The Corridor of the Schools," Prize (£5) and Silver Medal, Albert Edward Waterton.

Set of Four Drawings of a Figure from the Life—First Prize (£10) and Silver Medal, Joseph Greenup; Second Prize (£5) and Bronze Medal, Joannes G. A. Pisani.*

Set of Three Studies of Drapery—Silver Medal, Joannes G. A. Pisani.

Drawing from the Antique—Prize (£5) and Silver Medal, not awarded.

Painting from Still Life—Prize (£5) and Silver Medal, Percis Lucy Green; *prox. acc.*, Albert Edward Waterton.

Model of a Design—First Prize (£15) and Silver Medal, no competition; Second Prize (£10) and Bronze Medal, no competition.

Two Models of a Bust from the Life—First Prize, Silver Medal, not awarded; Second Prize, Bronze Medal, Arthur Glover.

Model from the Antique—Prize (£5) and Silver Medal, no competition.

Model of a Medal or Coin—"A Head of Mars—obverse; War—reverse," Prize (£5) and Silver Medal, Herbert Harry Cawood.

Set of Three Models of a Figure from the Life—First Prize (£15) and Silver Medal, Anthonius G. W. Slobbé; Second Prize (£10) and Bronze Medal, Herbert Harry Cawood.

Set of Architectural Drawings—"The Fronts of the two Houses on the north side of Cavendish-square," First Prize, Silver Medal, no competition; Second Prize, Bronze Medal, no competition.

An Architectural Design—Prize (£15) and Silver Medal, not awarded.

An Architectural Design (First Term Students only)—Prize (£10) and Silver Medal, Daniel Roye Lyne.

Perspective Drawing in Outline (open to Architects only)—"The Interior of St. Stephen's, Walbrook," Silver Medal, no competition.

Original Composition in Ornament (open to Architects only)—Prize (£5) and Silver Medal, no competition.

Architectural Design with Coloured Decoration—"One Bay of the Nave of a Church," Prize (£5) and Silver Medal, no competition.

Landseer Scholarships in Painting and Sculpture, of £40 a year each, tenable for two years, have been awarded—in Painting, to Evan J. Walters and Harold Williamson; in Sculpture, to William J. Bloye and Anthonius G. W. Slobbé.

THE CITY CHOP-HOUSE IN CHANGE-ALLEY.

Baker's Chop-house in Change-alley, Lombard-street, which had been doomed to disappear after an existence of 200 years, is to begin a new lease of life. Negotiations have been successfully completed, and the house is still open.

*Disqualified owing to having received the same prize before.

OBITUARY.

Mr. J. Ely.

We briefly announced in our last issue the death on December 3 of Mr. John Ely, of No. 32, King-street West, Manchester, aged sixty-seven years. Mr. Ely was the third son of the late George E. Ely, M.D., of Rochester. He was elected a Fellow of the Royal Institute of British Architects in 1888, and served as a member of the Council. He was President of the Manchester Society of Architects, 1897-8; and was member of the Council, 1899-1900, 1902-3, 1904-6, 1909-10, and 1914-15; and Vice-President, 1903-4. Mr. Ely was the successful competitor with his designs for the Salford Royal Hospital extension, in 1907, he being one of the eight invited to compete; of the new buildings for the Manchester Southern Hospital for some hundred cases, etc., 1909; restoration and enlargement of the old Manor House, Ashby Folville, near Melton Mowbray, for Mr. H. H. Smith-Carrington (illustrated in the *Builder* of August 12, 1893); and some few years ago he was appointed as architect for the Women's and Children's Hospital (to receive 120 patients in all) at the corner of High and Oxford streets, Manchester. He acted as assessor in the competitions for the Altrincham Public Offices and the Northern Congregational Schools at Silcoates, near Wakefield.

Mr. S. Elliott.

We regret to announce the death of Mr. Samuel Elliott, of Caversham, the founder of the firm of Messrs. Samuel Elliott & Sons (Reading), Ltd., which took place on December 13 last. The deceased was seventy-seven years of age, and was one of the early pioneers of the high-class joinery and moulding trade, with which his name was intimately connected for many years, both at Newbury and at Reading, and gained many gold medals and awards, at home and on the Continent. Mr. Elliott was born at Newbury, Berks, in 1838, and commenced business in his native town in 1859, succeeding to the building business of his grandfather. Deceased was a builder and contractor of considerable ability and eminence, and carried out several church contracts under the late Sir G. Gilbert Scott, the late Mr. G. E. Street, and for the late Mr. John F. Bentley at Westminster Cathedral. He also carried out a great deal of building work under the late Mr. Alfred Waterhouse, R.A., and the late Mr. Norman Shaw, R.A., notably under the latter architect, "Greenham Lodge," Newbury, and "Greenlands," Henley-on-Thames. He undertook the re-erection of Temple Bar in Theobald's Park, Herts, but of recent years he turned his attention to high-class joinery and mouldings, first at Newbury and latterly at Caversham Reading. The business at Caversham is being carried on at the present time under the name of Messrs. Samuel Elliott & Sons (Reading), Ltd. Mr. S. Elliott was a Freemason, belonging to the Deptford Lodge. The deceased had been suffering lately from almost total blindness, but his mental faculties were unimpaired to the last. He leaves a widow, two daughters, and three sons, two of whom are directors of the company. The interment was at Caversham on Thursday, December 16. He was of genial disposition and great energy, and made many useful inventions.

Mr. J. Lane.

We regret to announce the death of Mr. John Lane, senior country representative for Messrs. Carter & Co., Ltd., encaustic tile manufacturers, Poole, which took place on December 7. The deceased was the firm's representative for a considerable number of years.

PORTLAND CEMENT, NETHERLANDS.

H.M. Commercial Attaché at The Hague writes that there is at present a demand for Portland cement in the Netherlands. Prior to the war United Kingdom manufacturers had lost ground, but as supplies from Germany have now been greatly reduced there appears to be a good opportunity for regaining some of the ground lost.

CORRESPONDENCE.

Robert Mylne and the New River.

SIR,—Mylne erected a memorial to Sir Hugh Myddelton on the larger island in the New River basin at Amwell (Emma's Well), near Ware. On the north side of the pedestal, which carries a votive urn, is the inscription:—

"M.S. Hugonis Mydelton Baronette Qui aquas hasce feliciter adspirante favore Regio in urbem perducendas curavit opus immortale Homines enim ad deos Nalla re proprius accedunt quam salutem dando."

On the east side is inscribed:—

"This humble Tribute to the Genius, Talents and Elevation of Mind which conceived and executed this important aquaduct is dedicated by Robert Mylne, Architect, Engineer, etc., A.D. MDCCC."

The plan of the New River (1609-13) was given to Myddelton by Edward Wright, M.A., of Gonville and Caius College, Cambridge, who was highly esteemed in his day as a mathematician, and made the plans for supplying Cambridge with water, 1610, from the Nine Wells at Great Shelford—a scheme originated by Dr. Andrew Perne, Master of Peterhouse, 1554-80. W. E. D.-MILLIKEN.

The New Rent Bill.

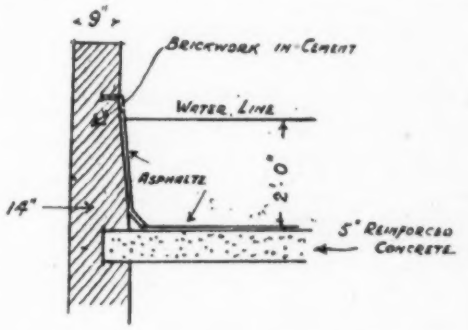
SIR,—Owing principally to demands for higher wages and war bonuses by the tenants of low-rented houses—often supported by strikes, now regarded as unpatriotic—the prices of all the commodities required by the owners of such properties have risen considerably; in other words, the purchasing power of the shillings they receive weekly as rent has diminished, while the difference between past and present value of this money remains in the pockets of their tenants. Can we be surprised that a slight increase of rent is asked?

In this connection I would also point out that owners of this class of property are themselves frequently very poor people, who have saved a few hundreds and bought a small row of cottages with the help of a building society. They have to work hard at the property just as if it were a business, and the present high-handed action of the Government almost suggests that authority of State should also be invoked to keep the prices of food, clothing, ironmongery, and wages at a pre-war level. H. CLORISTON.

Walls of Water Tank.

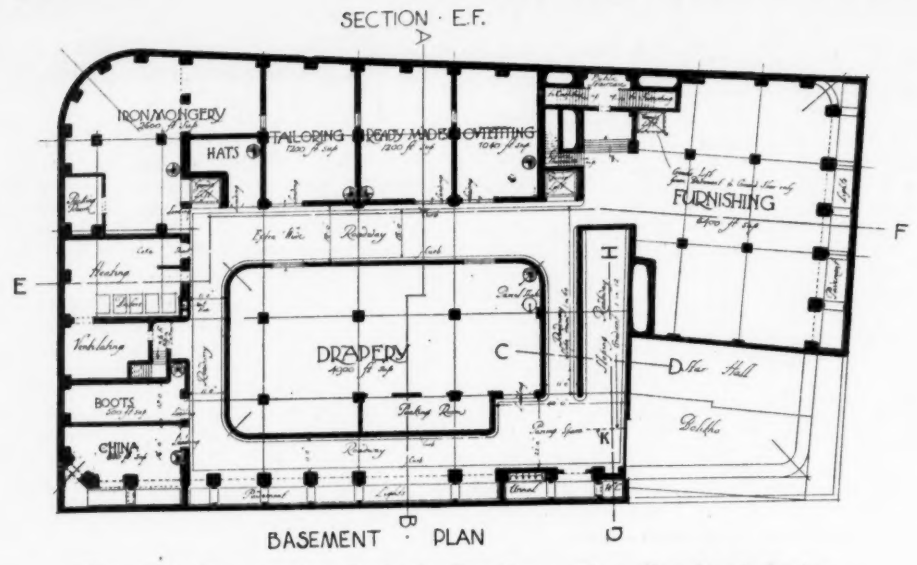
SIR,—I have to provide a water-tank on the roof of a factory, the size being 40 ft. by 36 ft. and 2 ft. deep.

The bottom of the tank will be 5-in. reinforced concrete covered with ¾-in. asphalt, and I propose to form the sides with brickwork in cement, battered from 14 in. to 9 in., as sketch.



The tank will be in a very exposed position and liable to get frozen over, and I wish to be quite certain that the expansion of the ice in frosty weather will not push over the parapet walls.

Would any of your readers give me an opinion as to whether the walls as suggested would be strong enough, and, if not, what would they recommend, or to what extent should the walls be battered? FROST.



Plymouth Co-operative Society's Premises: First Premiated Design.

By Messrs. Halliday & Paterson and C. G. Agate. (*See page* 442.)

THE ARCHITECTS' AND SURVEYORS' APPROVED SOCIETY.

THE annual general meeting of the Architects' and Surveyors' Approved Society was held on Tuesday, December 7, at No. 18, Tufton-street, Westminster, S.W., when Mr. Ernest Newton, P.R.I.B.A. (retiring President of the Society), occupied the chair.

Mr. F. R. Yerbury (Secretary) gave a statement of the progress and work of the Society, as follows :—

"The Architects' and Surveyors' Approved Society completed its third year on July 3, 1915, and members will be gratified to learn that it still maintains its successful course.

Approximately, there were, on July 3, 1915, 1,800 members of the Society, of whom thirty-six were women. These figures show an increase of 100 during the year; which, having regard to the general dislocation of business in the architectural and surveying professions consequent upon the war, may be considered as very satisfactory.

Much, however, can still be done by personal recommendation to increase the membership. Now that most of the many difficulties have been overcome which were experienced by this, in common with all other societies in the early days of the National Insurance Act, and the evidence which this Report gives of the Society's sound financial position, members should have an easy task to convince fellow-members of their professions of the wisdom of associating themselves with a society which is carried on exclusively for their benefit.

The Committee is now enabled to place before members the accounts for the first eighteen months of the Society's working as passed by the Government auditors, and, following upon the practice of previous years, it has appended to this Report a provisional income and expenditure account for the past year.

It will not be possible to ascertain the exact financial position of the Society until the official Government valuation has taken place. This valuation, which became due when the Insurance Act had been in force for three years, will no doubt take place shortly, and the Committee confidently anticipates that an extremely satisfactory state of affairs will be revealed. In the meantime, members will be pleased to learn that the Society has investments to its credit amounting to £2,140, £700 of which consists of new Government 4½ per Cent. War Loan Stock.

The claims paid by the Society during the year have been as follows :—

Men.		Women.	
Sickness claims ..	96	Sickness claims ..	6
Maternity claims	48		
Disablement claims	4		

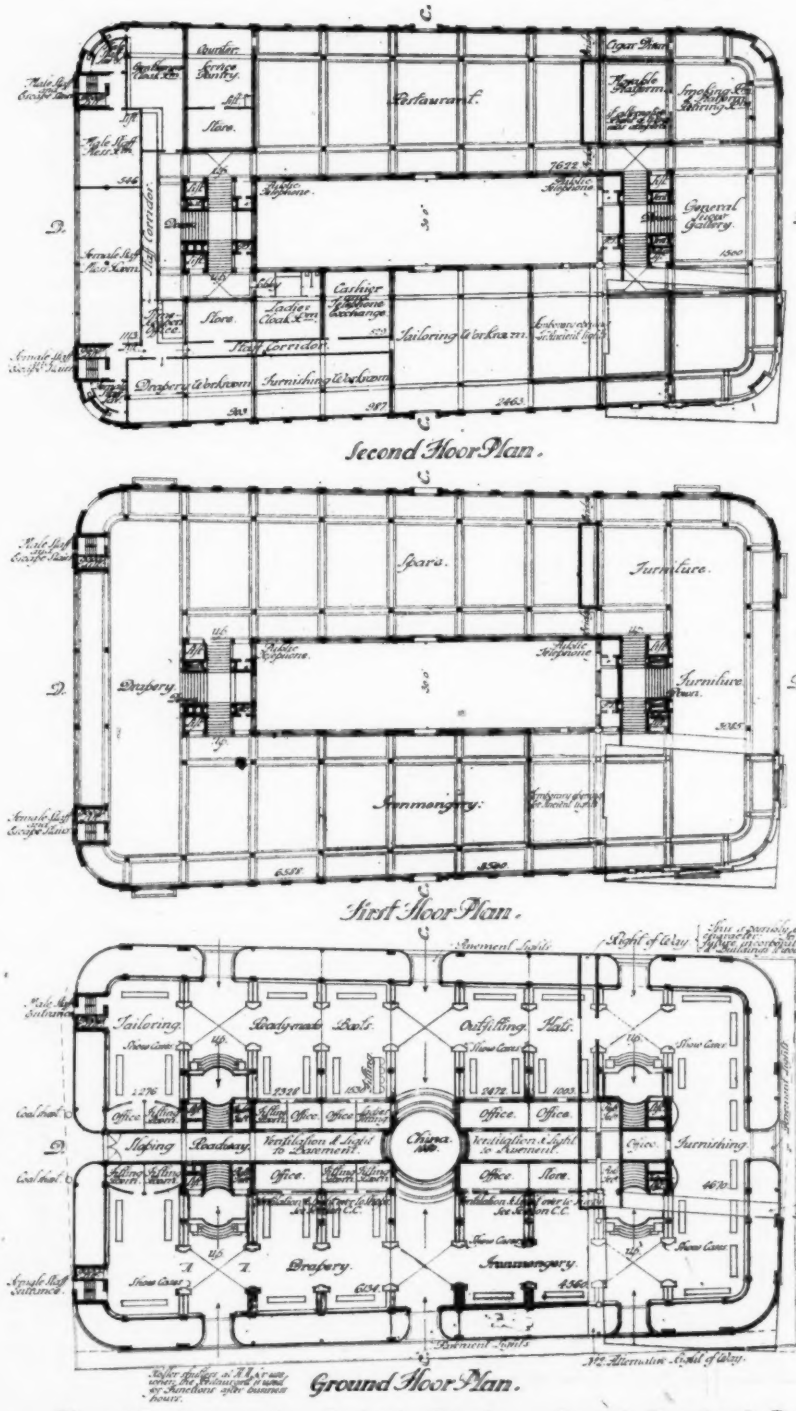
The amount actually expended on sickness and maternity benefit during the year has been considerably below that allowed for by the Government actuaries.

At the present time there are over sixty members known to be serving with the Forces, and a very large percentage of these hold commissioned rank. From the Committee of Management Messrs. Maurice E. Webb, C. T. Steward, W. G. Newton, and H. A. James are serving.

It is with the deepest regret that the Committee records the deaths of five members on active service. An expression of sympathy on behalf of the Society has been communicated to the relatives in every case.

The Benevolent Fund, which is supported by contributions and annual subscriptions from hon. members, has fortunately had no great calls upon its resources, but it has been able to render some really valuable assistance to certain members in urgent need of it."

Mr. Philip E. Webb (who is retiring from the office of Treasurer on account of his enlistment) spoke on the financial position of the Society. This, he said, was clearly shown in the Report, and he was sure everyone would agree that it was entirely satisfactory. The administration expenses were still well below the actuarial estimate, and the accounts for 1914 showed an additional saving of £30, making a balance



Plymouth Co-operative Society's Premises: Second Premiated Design.

By Mr. H. R. Gardner. (*See page* 442.)

of about £88. He was pleased to say the sickness benefits were still low, a third of the total amount paid in benefits being on behalf of maternity claims. In conclusion, he expressed the Society's thanks for the work done by the Secretary, Mr. Yerbury, and the Assistant Secretary, Miss Double, A.F.I., to both of whom the Society owed a debt of gratitude.

Mr. Ernest Newton moved the election of the Committee of Management, as follows:—

Chairman, Mr. George Corderoy, F.S.I.; Messrs. E. H. Blake, F.S.I., C. MacArthur Butler, F.C.I.S., A. G. Cross, F.S.I., Ralph Ellis, F.S.I., H. M. Fletcher, F.R.I.B.A., A. Goddard, George Hubbard, F.R.I.B.A., F.S.A., H. A. James, B. Marr Johnson, F.S.I., R. G. Lovell, A.R.I.B.A., Ian MacAlister, B.A., E. C. P. Monson, F.R.I.B.A., W. G. Newton, M.A., F.R.I.B.A., Herbert Passmore, F.R.I.B.A., F. R. Priest, G. Reeves, Clifford T. Steward, F.S.I., H. W. Virgo, Maurice E. Webb, M.A., Philip E. Webb, A.R.I.B.A., H. D. Witham, Treasurer, Mr. H. D. Searles-Wood.

The motion was seconded by Mr. George Reeves and carried unanimously.

Mr. George Corderoy, replying on behalf of the Committee, endorsed Mr. Webb's remarks, and said that the Society was fully maintaining the successful prognostications made.

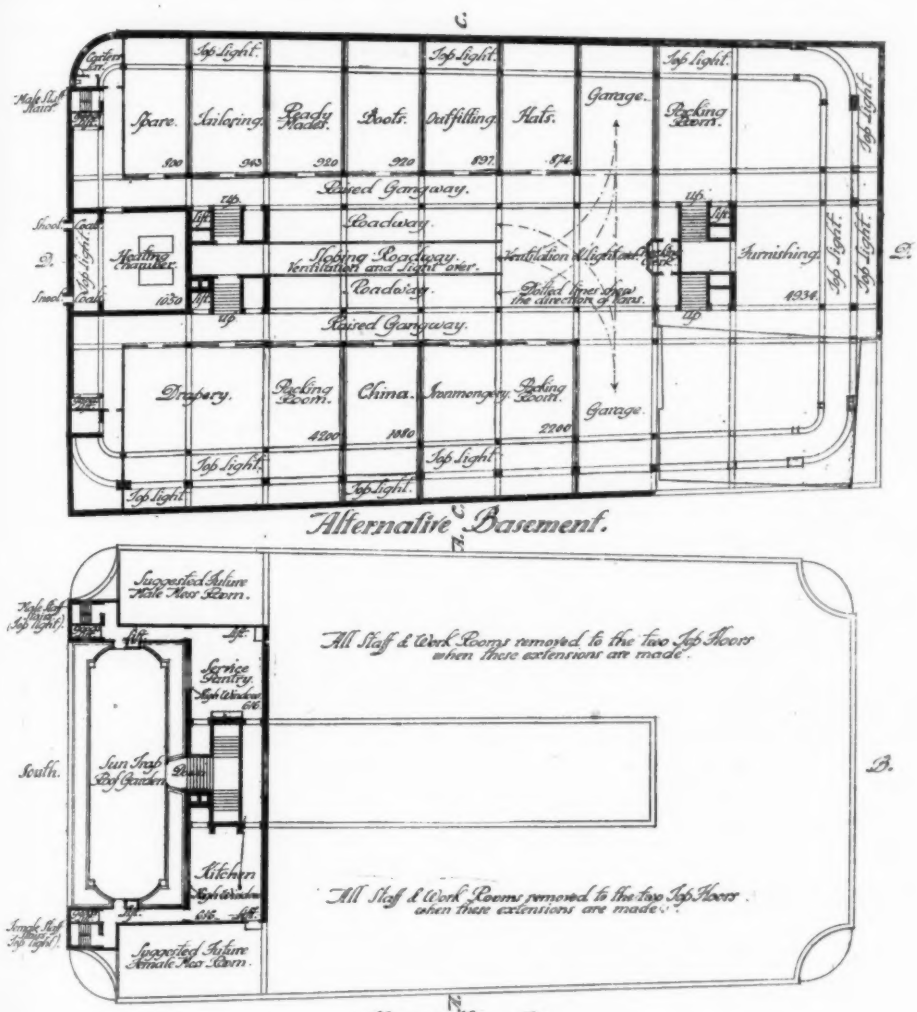
Mr. George Reeves proposed a vote of thanks to the Architectural Association for granting the Society free office accommodation, which was of the greatest financial assistance. Mr. E. C. P. Monson (President of the Society of Architects) seconded the motion, and it was carried unanimously.

Mr. Ralph Ellis proposed a vote of thanks to the retiring President, Mr. Ernest Newton, who was kindly presiding in the unavoidable absence of Mr. J. H. Hanson (President of the Surveyors' Institution). He regretted to say that Mr. Hanson was at present seriously ill.

The motion was seconded by Mr. H. D. Searles-Wood and carried unanimously.

Mr. Newton, in expressing his thanks, proposed that the Secretary should write to Mr. Hanson, conveying the Society's sympathy and hopes for a speedy recovery.

The meeting then terminated.



Plymouth Co-operative Society's Premises: Second Premiated Design.

By Mr. H. R. Gardner. (See page 442.)

BRITISH TIMBER.

To organise the market, improve the price, and encourage the use of, and demand for, British timber were the objects of an exhibition and lecture under the auspices of the English Forestry Association at the Surveyors' Institution on Monday. The exhibition was opened by Lord Selborne, the President of the Board of Agriculture, who was introduced by Sir E. Stafford Howard, K.C.B.

Lord Selborne said that the English Forestry Association had for several years past done a great deal of spade-work in preparing the ground for the better utilisation of the English timber supply and for the organisation of the English timber industry. Forestry had not been seriously considered as a possible source of support of the estate and support of the land. What they required was the proper organisation of British woods and plantations—something similar to the steps taken in Ireland by Sir Horace Plunkett with regard to dairy and farm produce. The war had come, and one of the effects had been an enormous demand for forest products. More English pit wood had gone to the coalfields than for years, but the supply was not adequate. The importation of wood for scantlings had been prodigious, and a good deal of it might have been produced in this country. It was of national importance that less should be imported. A few weeks ago the Government appointed a Committee to consider the way in which the reduction of the import of foreign timber could be accomplished. This Committee appealed to land owners and land agents to assist them. They asked them to view their woods and note what they could spare. Fir wood was chiefly needed, but there was also a considerable demand for ash. The Government asked them to do this, and to give any possible help in the felling and hauling of timber.

Mr. H. J. Elwes suggested that military wagons should be used for the transport of timber, and he instanced cases where timber had been standing many months, though it had been sold, owing to the shortage of workmen. He drew attention also to varying prices given for timber.

Lord Selborne, in reply to several questioners, stated that he could not say whether or not the advanced price now paid for timber was "extra war profit." The point was interesting, and he advised them to write to him, when the subject would have careful consideration.

Mr. M. C. Duchesne subsequently read a long and interesting paper on the subject of "English Timber: Before, During, and After the War," the first part of which we give on page 437.

MR. J. W. TAYLOR, F.S.I.

Mr. John Walton Taylor, of St. John-street, Newcastle-on-Tyne, whose decease we announced in our last number (page 424 *ante*), was elected a Fellow of the Royal Institute of British Architects in 1892. He was a Fellow of the Northern Architectural Association, and a member of Council, and served as President, 1902-5. Mr. Taylor enjoyed an extensive practice in the counties of Durham and Northumberland. He was the architect of:—In Newcastle: the Palace Theatre; Young Men's Christian Association buildings in Blackett-street; St. Paul's Church, Westgate-road, alterations and improvements; Soldiers' Home, with extensions, at Spital Tongues; social hall and schools, Shield-field; Forest Hall, Presbyterian church, and hall, and warehouse and offices for Messrs. Bainbridge & Co.; and he was one of the architects selected in 1899 to compete for the Newcastle New Infirmary. He was the architect of many Wesleyan, Primitive Methodist, or Congregational buildings in Morpeth, Wallsend, Seaton Hirst, Blucher, near Newcastle, Ponteland, Usworth Collieries, Low Fell, Thornley, and Gateshead.

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ILLUSTRATIONS.

Austrian Baroque Architecture.

WE illustrate a couple of interesting examples of Austrian Baroque architecture. Though open to criticism, such work often shows resource, invention, and fancy.

The Three Premiated Designs for the Plymouth Co-operative Society's Premises.

WE illustrate the three designs to which premiums were awarded in the recent important competition. Such a competition forms a useful precedent which should be more frequently followed. Commercial buildings must, in the nature of things, form the bulk of the architecture of our towns, and a competition for them draws attention to the importance of giving them architectural character as well as commercial utility. Were a large and uniform scheme of treatment more often adopted we should find the depressing commonplace appearance of our towns relieved by more architectural character—a consummation devoutly to be wished.

MEETINGS.

FRIDAY, DECEMBER 17.

Institution of Mechanical Engineers.—Ordinary general meeting. 6 p.m.

MONDAY, DECEMBER 20.

University Extension Lecture (at the Victoria and Albert Museum).—Paper by Mr. Banister Fletcher.

BOOK RECEIVED.

FORM AND COLOUR. By L. March Phillipps. (London: Duckworth & Co. 7s. 6d. net.)

DISCOVERIES AT ALL SAINTS', MAIDSTONE.

With a view to restoration, the double piscina, near the high altar in All Saints' Church, Maidstone, has been cleared of the accumulated rubbish. Amongst this rubbish the verger has discovered some interesting remains of fifteenth-century stained glass.

FIFTY YEARS AGO.

District Surveyor Wanted.

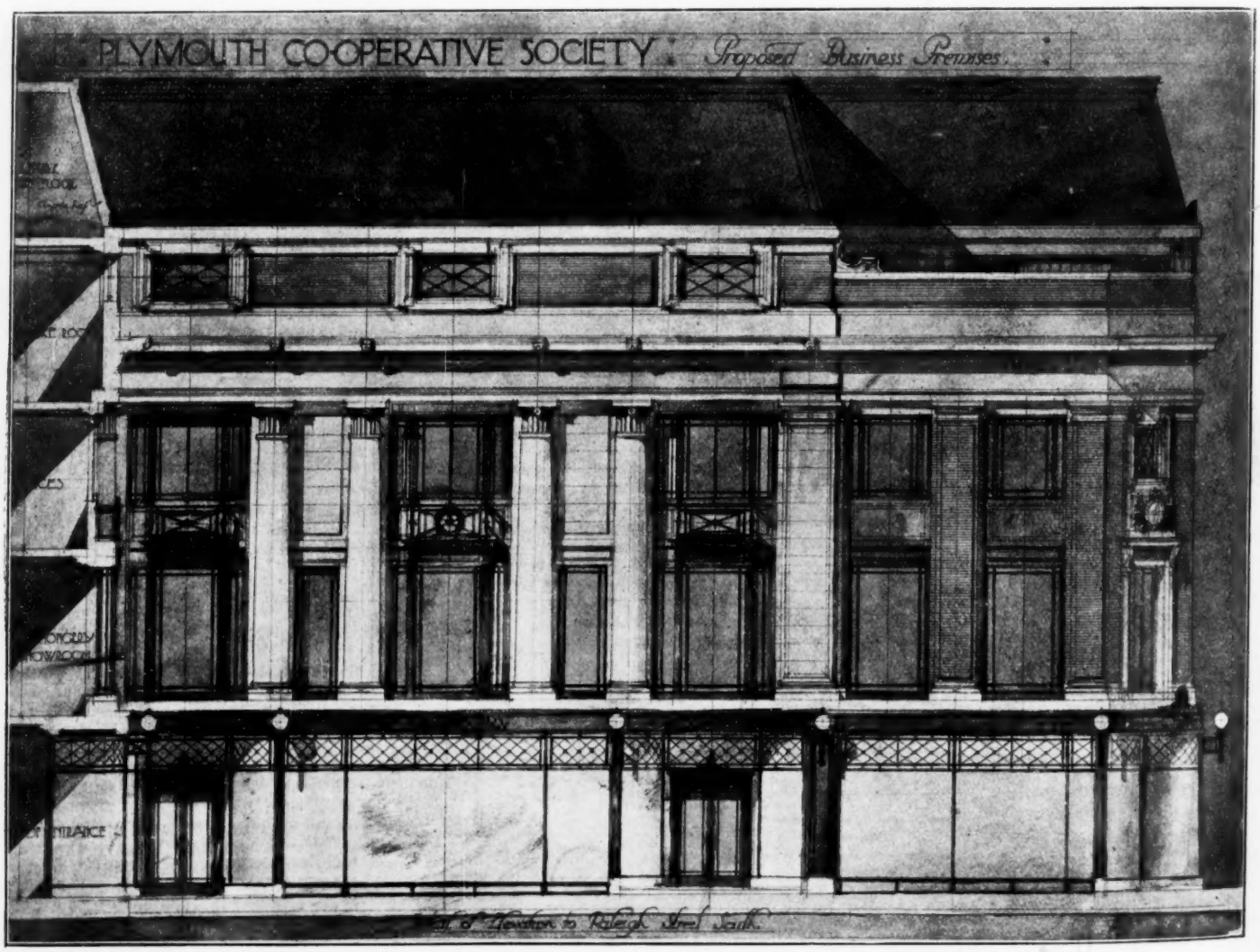
SIR,—The necessity for a district surveyor for the parts beyond Highbury New Park, as stated by your correspondent "X.," I can bear testimony to; for at Hornsey, Wood Green, West Green, etc., houses are springing up like mushrooms, both as regards quantity and quality. At Hornsey not only is a district surveyor wanted, but a sanitary inspector is required; for in the lowest parts ditches, or rather open sewers, are to be met with in every direction, sometimes on both sides of the public highway, poisoning the otherwise pure air; and should we be visited with the cholera next year, as prophesied, these contagion spreaders would prove very fatal, as most of the small houses are filled with lodgers, being principally the workmen of the Alexandra Park and Great Northern Railway works.

W. E. B.

[*** We give the above extract from the *Builder* of December 16, 1865.—ED.]

MR. A. W. SINCLAIR, J.P.

Mr. A. W. Sinclair, who has been appointed a Justice of the Peace for Scarborough, is President of the National Federation of Building Trades Employers of Great Britain and Ireland. He has held the office of President of the Yorkshire Federation of Building Trades Employers, and has been the representative of the Scarborough Master Builders' Association upon that Board since its inauguration some eighteen years ago.



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CONSTRUCTION SECTION.

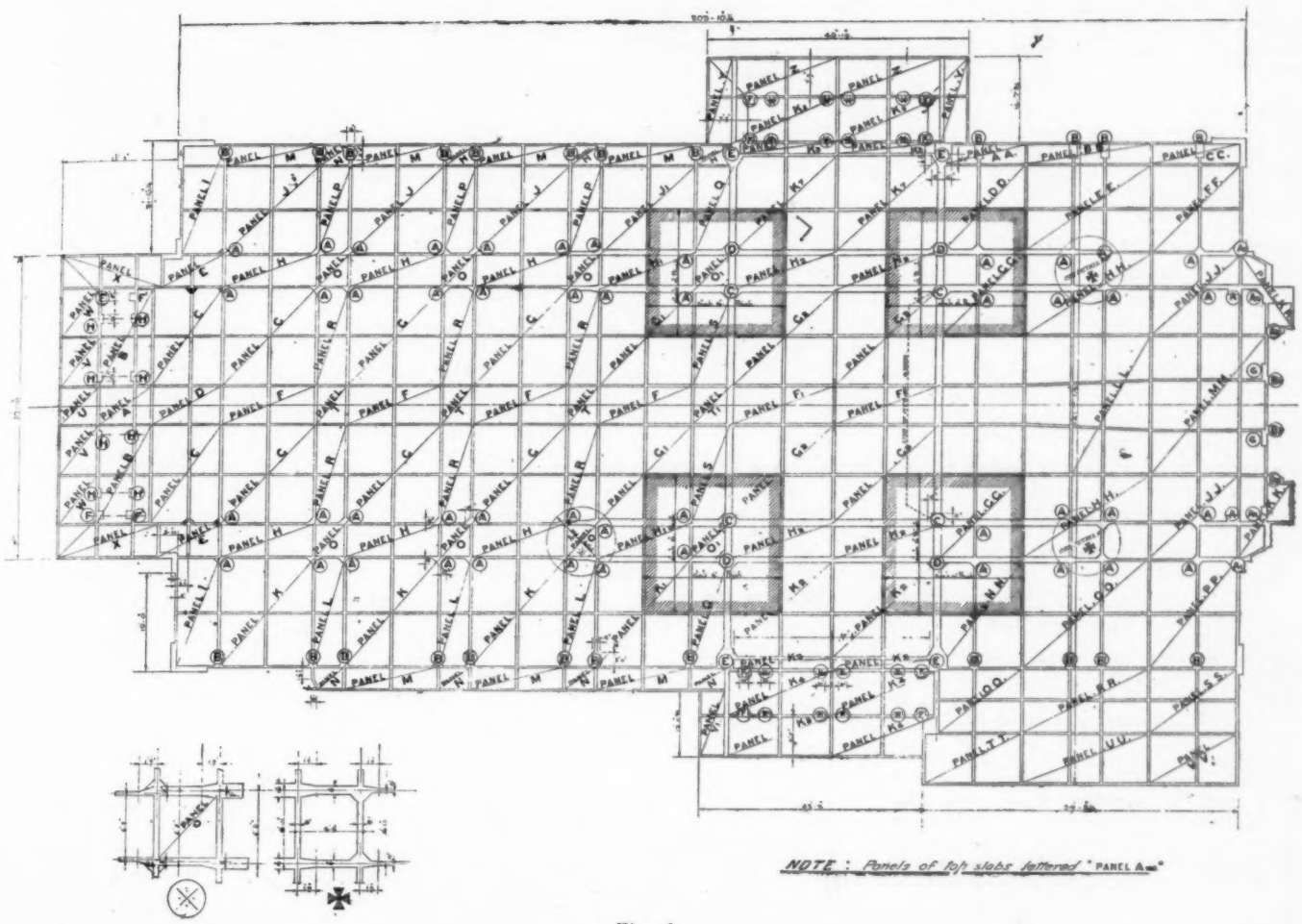


Fig. 1.

GEORGETOWN CATHEDRAL, DEMERARA.

IT is always interesting to study the special methods employed by designers when dealing with exceptional difficulties that have been encountered by them in any particular building scheme, and it is by a study of such cases that real benefit can be obtained, because it will assist in the development of the thinking power of the student and prevent him from becoming too stereotyped. Such a case is provided in the conditions which obtain in the Georgetown Cathedral, now being erected from the designs of Mr. Leonard Stokes, F.R.I.B.A., architect, and, in fact, the satisfactory erection of the structure was only rendered possible by the application of the most scientific principles when dealing with the construction.

The whole of the ground in Demerara consists of a silty accumulation from the big rivers, and it was found upon investigation that practically all the buildings in the place of any size show signs of settlement. It would obviously be very undesirable to have any settlements in the structure of such a building as a cathedral, which is of the arched type, and furthermore the bearing capacity of the soil is so low that it was necessary to reduce the dead weight to the minimum; while extensive excavation would have been difficult and costly, and no advantage would be gained. After some consideration it was decided to build the whole structure in reinforced concrete, with a large reinforced concrete raft covering the whole area of the building, and thus secure the maximum of strength with the minimum weight, and at the same time an excellent distribution on the soil is obtained.

This reinforced concrete work was executed in accordance with the Considère system, from designs and details prepared for the architect by the Considère Construction Company, 5, Victoria-street, Westminster, S.W. The length of the raft is about 235 ft. and the maximum width about 138 ft., it is of cellular construction, 5 ft. high, and rests on the natural surface of the ground without any excavation whatever having been made. A local contractor executed the raft in a successful manner under the superintendence of a qualified clerk of works, and the superstructure itself is now being proceeded with. The raft is designed with a top and bottom slab, 4 in. or 6 in. thick, and divided up into panels about 6 ft. square, with longitudinal and transverse beams. Owing to the importance of getting as even a distribution as possible over the soil, the bottom panels were omitted in certain cases under the lighter portions of the building, so as to increase the unit load on the ground and make it correspond approximately with the unit load occurring under the heavier parts. The beams between the slab vary considerably in size and strength, according to the load transmitted to them from the piers and side walls of the cathedral. Some of the largest are those which cross the building under the piers carrying the central tower and spire, the height of the tower being about 130 ft. and the spire above being about 70 ft., thus giving a total height of about 200 ft. from the ground level; and a detail of one of these beams is illustrated in Fig. 2. Considerable loads are brought on to the beams at six different points, and the general arrangement of the reinforcement and the number of rods employed can be seen on the drawings illustrated. The depth of the raft is 5 ft., and the thickness of the beams between the slabs is generally 16 in., but this is increased immediately under the concentrated loads to 33 in., and splayed portions 13 in. wide are formed at the top and bottom when the junction is effected with the slab, as the rods in some cases are spaced over a width of 26 in., which is greater than the width of 16 in. mentioned for the web of the beam. Vertical bars were provided in the webs to come between the longitudinal bars, and these are bent over at both ends to anchor the main reinforcement to the mass of the concrete; while gusset bars are provided which run parallel with the splayed concrete at the junctions of the beam and slabs. The connection between the beam and the columns above was effected with lengthening bars 7 ft. 6 in. long, which were put in during the construction of the raft, and to which the column rods were spliced.

The superstructure contains some interesting details, as, in order to keep this as light as possible, all the piers are made hollow, and the walls are of the minimum thickness; while at the same time great care had to be taken in designing the cathedral against wind pressure, as the gales in the Colony are occasionally violent. Certain portions of the work, as, for instance, the gargoyles and the window tracery, will be moulded on the ground in advance, lifted into position, and bonded in with the reinforced concrete work deposited *in situ*.

It is quite unique to find the window tracery in a cathedral building executed in concrete, and, although such a material may not appeal to the master mason, it is evidence of its adaptability to any class of work, and it possesses the merit of making the whole structure uniform in this particular instance. A few years ago such a purpose for reinforced concrete would have been looked

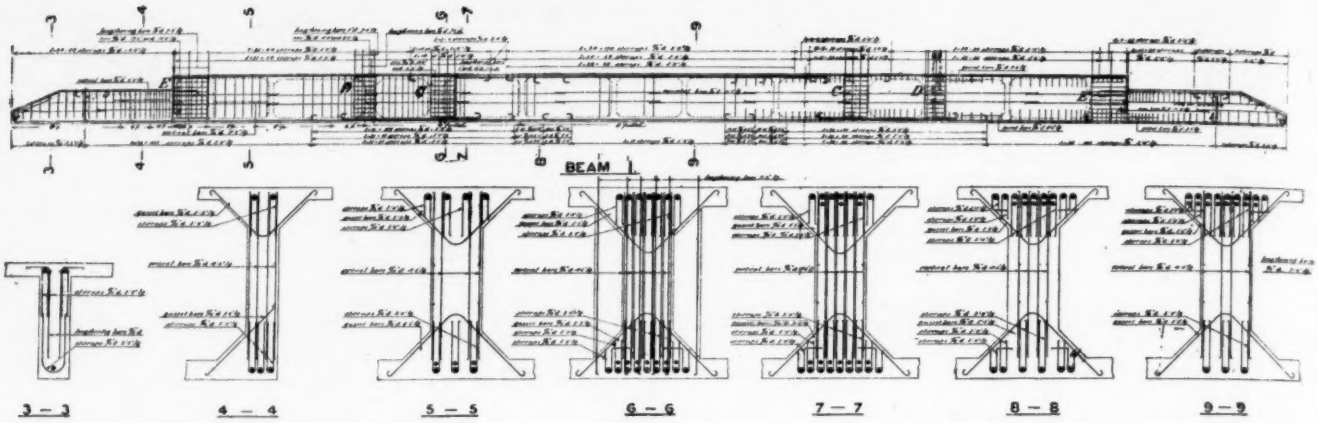


Fig. 2.

upon as quite impossible, and yet it is now being successfully applied.

The drawing illustrated in Fig. 3 shows the work to the nave arches and piers, together with the aisles.

The width of the nave between the piers is about 42 ft., and the arches which span this distance spring from a level of about 45 ft. from the nave floor, and the crown is about 60 ft. from the same floor level. It will be seen on reference to the drawing that the roof is carried by reinforced concrete purlins, these being 12 in. by 6 in., and reinforced with four bars, and to these wood plates are bolted for the fixing of the roof covering. The main roof supporting members which occur at each nave pier consist of two arched ribs, each 6 in. thick and 6 ft. apart, with the top edge following the pitch of the roof, and the lower edges connected by the continuous arched reinforced slab which forms the vaulted ceiling to the nave. These members are well reinforced with horizontal bars to prevent any tendency to spread outwards, and, in addition, other bars are carried well down into the concrete at the head of the nave piers. The curved slab forming the vaulting of the nave is 4 in. thick, and this is reinforced with rods in both directions and surfaces. The nave piers, which project beyond the general external face in the form of buttresses above the aisle roof, have a depth of about 8 ft. 3 in. from inside to out, and they are constructed with 6 in. or 5 in. sides and face and hollow interior, and a 2 ft. inner portion where the load is greater. The wall between these piers is also hollow, divided by horizontal divisions or slabs between inner and outer leaves at intermediate points in the height. Under the level of the aisle roof a gallery is formed in the thickness of the piers, which are split up into two separate columns, connected by a vault of reinforced concrete 6 in. thick. The side aisles, which are about 16 ft. wide and 17 ft. high, are finished by a reinforced concrete vault, and from the back of this ribs are carried up at each pier, with small columns above to support reinforced purlins, which in turn carry the pitched roof. The gutter and parapet to the aisle walls are also of concrete, as will be seen in the drawing—Fig. 3—which gives a good general idea of the disposition of the concrete members and the reinforcement, the whole forming an excellent example of scientific design in construction.

An equally interesting drawing is that illustrated in Fig 4, where the design of the arches under the tower and the walls over are shown. The arches here shown have a span of about 36 ft., the width of the transepts, and a rise of about 15 ft. The concrete is formed to give a profile suitable for the finishing mouldings, and the thickness therefore varies, but the average is about 2 ft. 3 in., and the walls of the tower above are hollow, being formed with two leaves of concrete, each 4 in. thick, with a space of about 18 in. between. These divisions of the wall are reinforced with rods in both surfaces and directions.

The floor of the ringing chamber, which comes about 15 ft. above the crown of the transept arches, is formed with 4 in. of reinforced concrete, carried by four arched diagonal reinforced ribs, each 6 in. thick, and having a depth at the springing of about 13 ft. Reinforced concrete vaulting, 6 in. thick, springs from the lower part of these ribs, and spans the distance between them.

The method of tailing down these ribs to the work at the support is worthy of notice. The most striking feature about the tower construction is, however, provided by the designer's method of tying in the lower part of the tower to prevent any outward spreading.

It will be realised that with a structure of this kind, where the weight was reduced to a minimum, there would be insufficient to take up the outward thrust occurring at the base of the tower by the arches, and it will be seen that the designer has arranged what constitutes a steel belt right round the four sides, this consisting of eight horizontal bars each 1 in. diameter spaced vertically over a depth of 3 ft. 6 in. These bars are continuous at the corners, and a 3 ft. lap occurs at the ends of two adjoining bars. Horizontal ties are provided to three sets of the bars to anchor them to the mass of concrete forming the arch itself.

The whole building is full of interest, and it forms a good subject for the study of advanced construction, from the theoretical and practical points of view, in which the conditions of the site presented difficulties that were overcome by the application of a suitable material.

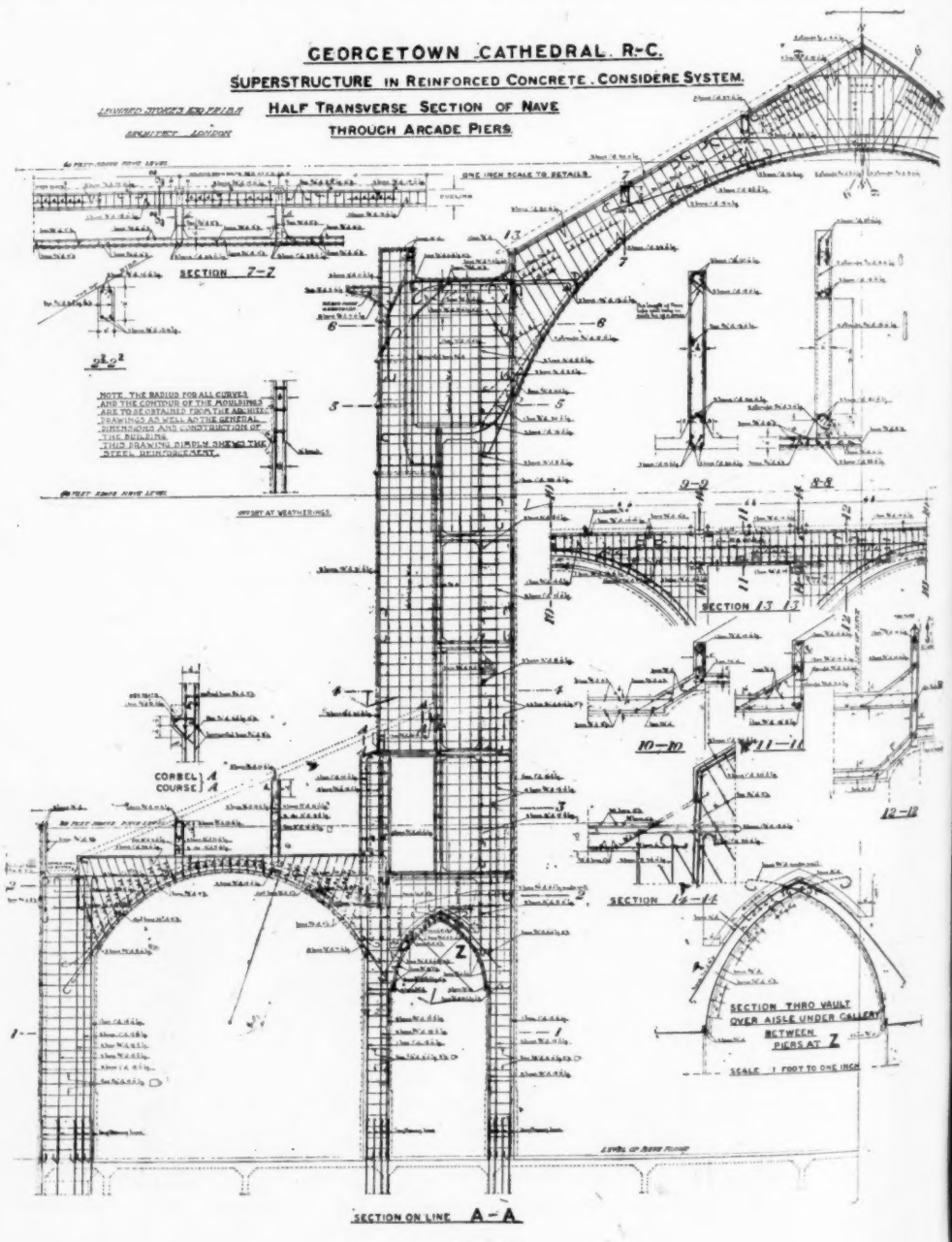


Fig. 3.

THE SOCIETY OF ARCHITECTS: FROM MANSION TO MAISONNETTES.

AT a meeting at the Society of Architects, on December 9, Mr. Herbert Freyberg, F.S.I., read a paper entitled "From Mansion to Maisonnettes," in the course of which he said:—

"The expression 'mansion' seems to imply a building at once extensive and, certainly as regards management and accommodation, one which is unwieldy. This must be taken in a relative sense and to mean that in this case there are more rooms, more floors, and, above all, more stairs than are necessary for the occupation of the premises by the class of tenant likely to be obtained in the particular district. The neighbourhood and its advantages or the reverse are therefore so much a dominating factor that unless this is fairly studied to start with, a satisfactory result can scarcely be hoped for. It has been urged that conversion of houses into maisonnettes tends to lower the tone of a residential district, but surely it is far better to have two small families of good position in a residence rather than the *omnium gatherum* crowd which usually occupies the average boarding-house, and that, with a large residence, is often the only alternative.

The causes tending towards the disuse of the larger town residence are several, and comprise:—

(1) The bigger staff of servants required.

(2) The increasing difficulty in securing efficient servants and retaining them when secured.

(3) The unlimited liability entailed by strict repairing covenants on the part of the lessee, more particularly as regards structural and external works.

(4) The general shrinkage of middle-class incomes, coupled with the increased cost of living.

(5) The influence of the ever-present motor-car and the not unnatural desire for a little place in the country in which to spend week-ends.

As none of these factors are likely to be of less influence in the future than in the past, it follows that the single occupation of the larger town residence is likely to become more and more a negligible quantity. Nursing-homes, private hotels, boarding-houses, and clubs already exist in numbers greatly in excess of the general requirement, and no increased demand in that direction is either likely or desirable.

When the property has the disadvantage of being leasehold, the bearing of the covenants must be considered first of all; in most cases their trend will be both to prohibit the alteration of the building into what may, for the purpose of our paper, be deemed to be two or more separate tenements, and to prevent the premises being used other than as "a private dwelling-house only." This is a detail which must be dealt with before any alteration is attempted or trouble is likely to ensue. Patience, perseverance, and politeness are required in making applications for consents of ground landlords and issue of their licence, and, although one cannot grudge the payment of a reasonable professional fee for the services entailed, one does complain of time so often wasted before the necessary consent is obtained. While it seems only right that the freeholder should not be put to any costs in the matter, it does not seem fair to me that an increase in the amount of the ground rent should be made one of the conditions of the licence. That, so far as I know, is only prevalent on a few estates—fortunately very few.

Another condition which is sometimes insisted on is an undertaking required from the lessee to reinstate at the end if called upon, a condition which, with a trust lease, benefits no one and puts a blot on the title.

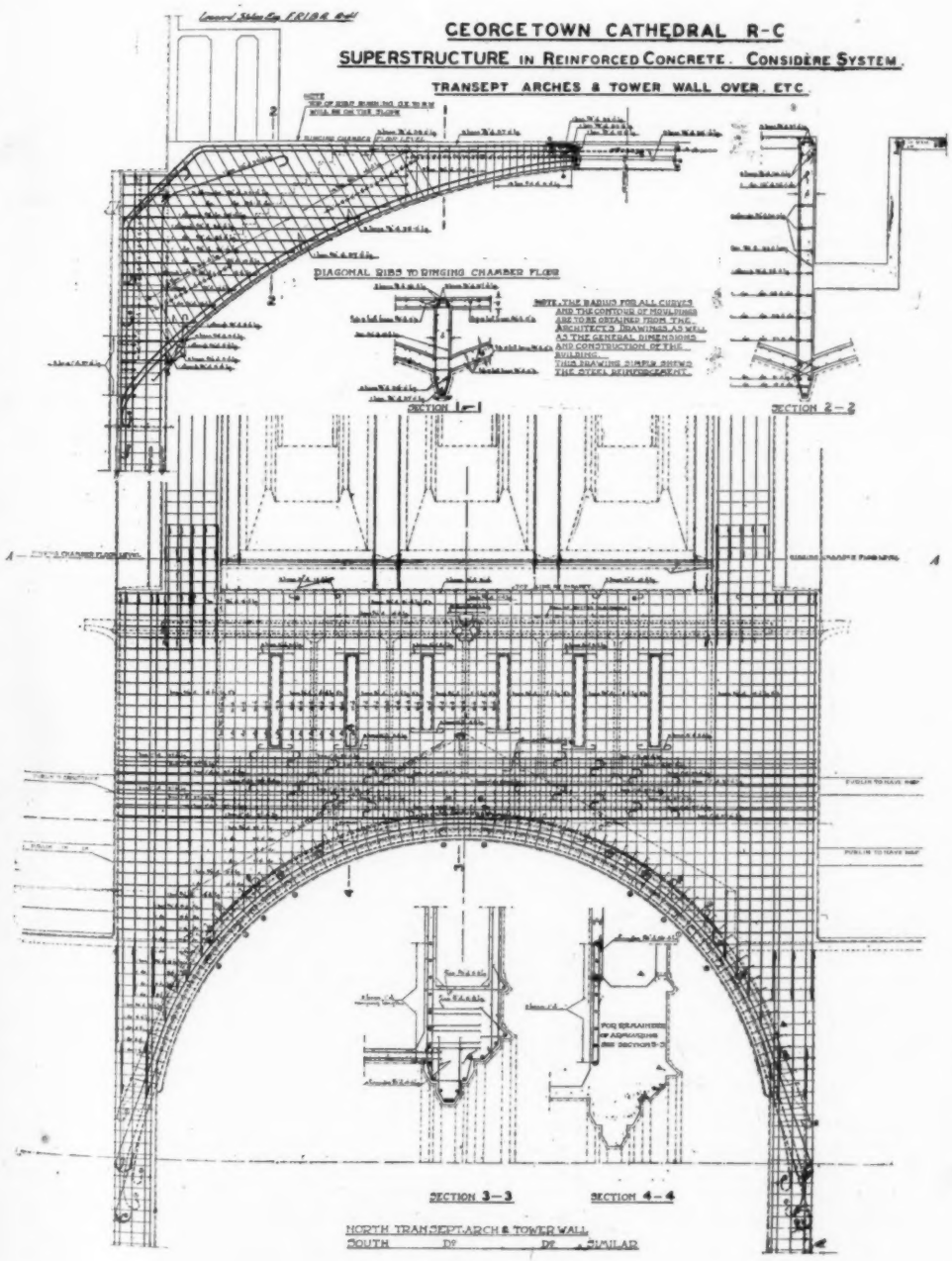
Under the London Building Act, so long as the suites do not either exceed a given area or are more than two in number with a user in common of the street door, they are not treated as new buildings within the meaning of the Act, which means a considerable saving of what might be a big expenditure on making floors and staircases what are called fire-resisting. Proper means of escape in case of fire are, however, very properly insisted on and are generally easy to provide.

An inquiry as to the principle upon which the particular local authorities administer the rule as to rateable value before and after alteration is most advisable, as in my experience their practice has varied considerably, and in some cases has not erred on the side of equity. To take a concrete case: A residence which had an original rateable value of £75, so that when it was occupied it only produced about £25 in rates, was, after alteration, increased in rateability by the local authority, with the result that nearly £45 per annum was levied on the unfortunate owner.

The question of cost is a difficult matter upon which to express an abstract opinion, as the outlay for adaptation is influenced by many considerations, the most important one being the original condition of the premises. A rough rule-of-thumb to apply to the structural alterations pure and simple is to calculate that it will never be less than one-fourth and it may be as much as one-half of the first cost of the original structure. The necessity for partial or complete reconstruction of the sanitation is a matter which can only be judged by the individual property. In any case this important detail must be rendered above suspicion. Hot-water supply will most likely have to be new throughout, while a system of central heating in some cases will be required as well. Electric light, even if already installed, will have to be separated into two systems, and the same will apply to the gas supply, which is a most important detail both for cooking and heating.

A certain number of chimney-pieces and stoves with tiled hearths will usually have to be provided, certainly for the reception-rooms. The decorations will have to be new throughout, and stinting the coats of paint will be found to be false economy, while good wall-papers always attract by giving the finishing-touch. One detail which it is almost impossible to be too generous upon is the provision of cupboards, because flats, with which maisonnettes have to compete, seldom have more than one, or, say, two, if the space in which the servants sleep is included.

The first most important, and certainly the most difficult, is that of the stairs, for I hold that the hardest task an architect is ever called upon to perform is to alter an old or provide a new staircase to an existing building. Like everything else in life, the simplest plan is the best, but inspiration does not always respond immediately to invocation. As soon as the architect has solved the staircase difficulty—and later on I shall return to this question—the next most important problem is to plan the sanitation, so that, while the Public Health Acts are followed, convenience of arrangement is studied and the whole system so designed that pipes of all description are the fewest as


GEORGETOWN CATHEDRAL R-C
SUPERSTRUCTURE IN REINFORCED CONCRETE. CONSIDÈRE SYSTEM.
TRANSEPT ARCHES & TOWER WALL OVER. ETC
DIAGONAL RIBS TO RINGING CHAMBER FLOOR
SECTION 1—1
SECTION 2—2
SECTION 3—3
SECTION 4—4
NORTH TRANSEPT ARCH & TOWER WALL
SOUTH Do Do SIMILAR

Georgetown Cathedral. Fig. 4.

regards numbers and the shortest as regards length. In most cases some strengthening will be necessary to the floors, especially of the original bedrooms, which are now to be changed into sitting-rooms, as what is strong enough for a bedroom, with its comparatively light and scanty furniture and certainly few occupants, is not necessarily strong enough for a sitting-room.

Where the basement is not too extensive and possesses the advantage of being light and airy, it can be often included in the lower suite, which would then comprise the first, ground, and basement floors. This, however, has the disadvantage of possessing three flights of stairs, but, as the suite is entered on the central floor and by including the first floor, the basement can be given up to the domestics, it does not so much matter. The planning on three floors generally means more domestic service, and therefore two servants, so one of the advantages of compact planning is at once lost. The best plan of all is no doubt to ignore the basement, or at least the greater part of it, for letting purposes, and retain it for a residential caretaker, with provision for central heating and continuous hot water. This arrangement allows the lower suite to be entirely planned on two floors, while the upper suite can be arranged similarly on the same number. The accommodation appealing to the larger number of people comprises four bedrooms, bath-room, two water-closets, two reception-rooms, kitchen, scullery, etc., and in many large houses of five floors it is possible to get this accommodation contained both in the two lower and two upper floors. Every inch of space must be utilised, and there must be no dark corners.

Economy of working must be the watchword, and every detail arranged with this end in view. With central heating and radiators in the principal rooms, and auxiliary gas stoves, the labour and dirt of fires can be reduced to a minimum. With continuous hot-water supply the cumbersome range with its extravagant fire is not required, as a gas cooker is all that is necessary in summer, while the smallest and most economical of grates can be used as an auxiliary in cold weather. Tradesmen's lifts to the upper suite obviate many difficulties, and they should, if possible, be made accessible from a special back-door entrance.

For a very much lower rent the resident can live in a much better neighbourhood than he otherwise would be able to afford, his payments are inclusive, while his liability for repairs is strictly limited and easily calculated. In comparison with flats, the rents are from 50 to 80 per cent. less; the accommodation is not only much better in every way, as nearly, if not all, the rooms have a bright and open outlook instead of facing a blank wall in a central area, as is the case in so many flats; there is more privacy, as the stairs are in each case used only by the particular tenant; while, if there is central heating, continuous hot water, and a resident caretaker, all the advantages are on the side of the maisonnette. . . .

Outgoings on a freehold property comprise :—

(1) Borough rates.
(2) Water rate.
(3) Inhabited house duty.
(4) Caretaker's remuneration.
(5) Fuel and sundries.
(6) External and structural repairs.
(7) Insurance.

The first two depend on the rateable value and the rates current in the district, the third upon the amount of gross value. The outlay under (4) and (5) should be calculated and charged to the tenants, while to provide for the sixth item a certain amount should be put away every year to form a fund available for periodical external repairs. As regards internal repairs, the suites should either be redecorated by the tenants on leaving or an agreed sum paid by them in lieu thereof.

In properties which I have dealt with, and shall describe in greater detail, it must be assumed that while the neighbourhood is eminently good and respectable, a fashionable part of town like Mayfair, or even Belgravia, is not alluded to, but rather Kensington, Bayswater, Chelsea, etc., so that the possible tenants, although of fair position, would be of limited means—of incomes from, say, £500 to £700 per annum. The £500 to £700 class have had their houses pulled down and replaced by mansions, if not palaces, so that small houses in really good positions fetch rents out of all proportion to their real value, and are therefore prohibitive as regards terms and tenure to this class of tenant.

For purposes of comparison in judging the property as an investment, certain points must not be overlooked, viz. :—

(1) The present market value of the property unaltered.

(2) The outlay required to put it into complete structural, sanitary, and decorative repair in order to secure a tenant in one occupation.

(3) The sort of tenant likely to be obtained, the amount of rent and conditions as to repairs.

As an illustration, say, a five-floor residence with some eighteen rooms in a neglected condition, and requiring immediate expenditure of some hundreds to put it into order as a single dwelling, will only realise for the fee simple in its present condition, say .. £800
but requires an immediate expenditure on structural repairs, new sanitation, hot water, electric light, new decorations, etc., costing, at present rates, say 450

£1,250

when complete will let at, say, £100 per annum on a three years' agreement, which, on paper, appears a very good return, but when, as each tenant vacates, a loss of six months' rent is entailed ere the property is let again, and partial, if not entire, redecoration has to be faced, the nominal 8 per cent. is reduced to 4 per cent., and that with much trouble entailed.

Now take the property remodelled :

Original value of fee simple of the property in bad order, say	£800	
Less costs of sale	30	
		£770
New staircase, new partitions, additional windows (with prismatic glass), new ceiling, roof, etc., turning a room into a habitable apartment, provision of escape from fire, steelwork necessary for strengthening upper floors, also 6 in. of concrete over basement with wood-block floors, including new plastering and cornices	£480	
New sanitation, complete with fittings	220	
System of heating with radiators, hot water supply, and certain new stoves and chimney-pieces	200	
Installation of electric light with fittings complete, and electric bells	90	
New gas services, heating and cooking for two flats, and lighting and heating for caretaker	20	
Internal decorations	160	
Cupboards and fittings	50	
External repairs and painting ..	70	
General and sundry work	40	
		1,330
		£2,100

These figures are not theoretical but practical, having been taken from some works just completed at a large house in Brunswick-place, Hove, and are for works carried out in the most efficient manner, the hot-water supply and heating arrangements, electric light, etc., being installed by firms of high standing.

Now take an estimate of the return :—

Upper suite, say	£90
Lower suite, say	110
Charge for partial service of caretaker and cost of fuel, say	52
	£252

Borough rates, water rate, and inhabited house duty	£48	
External repairs	15	
Allowance to caretaker	16	
Expenses of management	5	
Fire insurance	2	
Fuel..	18	
		104
		£148

which shows some 7 per cent. upon the cost, or, allowing for empties and taking into account the outlay on architect's fees, means a return of between 6 and 7 per cent.

There are no doubt many other methods besides those I have mentioned, and if the expense warrants the outlay, and the property comprises more than five floors and provides for more accommodation than is required in two suites, a third or fourth suite can be arranged with the provision of a self-acting passenger lift. In many large houses the ground floor has a height of some 11 ft. or more, with 12 ft. on the first floor and 10 ft. on the second, and, as the thickness of the floors is generally at least 12 in. in depth, it will be found that with the alteration of the windows and the fireplaces and the substitution of a ferro-concrete for timber floors one extra floor of rooms 8 ft. to 8 ft. 6 in. in height can be worked in, while an extra story in the roof can also be arranged at the same time, and so very great addition made to the existing accommodation."

BOOKS.

Reinforced Concrete Construction. Edited by BERNARD E. JONES, assisted by ALBERT LAKEMAN. (Waverley Book Co., Ltd., 7 and 8, Old Bailey, E.C.)

THIS well-written book will be welcomed, for reinforced concrete does away with the necessity for heavy and complicated constructional steel work and at the same time enables us to obtain all the advantages of steel, while the dangerous weakness to which all iron and steel construction is open—rust—which necessitates constant watchfulness and painting, is entirely eliminated. More than this, it does away with what has been, and probably always will be, an insoluble crux to the designer—the apparent impossibility of obtaining satisfactory æsthetic results by the use of iron and stee work in heavy structural forms.

In reinforced concrete construction it will b found that the scientific use of material goes hand in hand with the possibility of pleasing æsthetic design, and such bridges as that over the Teufen, in Switzerland (page 309), and the Oceanside Bridge over the San Luis Rey River, California (page 300), show that scientific construction and pleasing appearance are compatible with one another. Indeed it may be said that if our legislators wished to preserve the beauties of English scenery from a form of desecration they could do it by insisting that all new railway bridges should be carried out in reinforced concrete instead of naked steel, and in all probability it would be found that the interests of both science and economy had been promoted, as well as those of art. In building it enables the architect to use arched forms in roofs and ceilings which would be otherwise impossible without heavy and expensive buttressing and walling. In our tropical possessions the use of ferro-concrete is bound to be a growing one, and it is well known that most of the buildings erected after the recent earthquake at Kingstown, in Jamaica, are of this material; while there seems to be no constructional limit to a material which can be used for barges, cantilevers, aqueducts, swimming-baths, and piles.

The book before us deals with the materials and methods of mixing concrete, the calculations employed to calculate strains and stresses, and the theory of reinforced concrete. Further chapters describe and show, by illustration, how buildings in it are erected and the nature of the forms and centerings used. Afterwards the various systems are described and analysed, the architectural and surface treatment discussed, while additional chapters deal with the durability of ferro-concrete and the varied applications and examples of its use. It forms an admirable example of the clear and concise treatment of an important technical subject, and the architect who studies it will find that he has sufficiently mastered the subject to be able to use ferro-concrete with confidence and success.

THE BUILDING TRADE.

THE TRADES TRAINING SCHOOLS.

A MEETING was held in the Carpenters' Hall, London-wall, E.C., on Monday, the 13th inst., presided over by the Master of the Carpenters' Company (Mr. Walter T. Pullein), at which representatives of the other City companies connected with the crafts were also present, when the prizes were distributed to successful students by Sir Thomas G. Jackson, Bart., R.A. The Chairman of the Schools Committee (the Rev. Chas. Blakesley Bartlett) read his annual Report, and announced that Mr. Chas. L. Hartwell, the Instructor in the Life Class, has been elected an Associate of the Royal Academy. He also stated that a series of demonstrations have been arranged for students from University College, as in previous years, and a Manual Training Course has also recently been started.

Mr. Banister Fletcher, who has taken over the duties of the Director of the Schools, in the absence of his brother, Major Herbert Phillips Fletcher, who is at present serving with his regiment in France, then read the annual Report, in the course of which he said:—"The schools were reopened on September 20, when the war had already entered on its second year, and, in spite of the number of last session's students who joined his Majesty's Forces, there are still some 120 names on the registers, but, even if there were only half that number I contend that by training craftsmen in these Schools you would be doing good and necessary work for the State during war-time." Mr. Fletcher then went on to give a general survey of the various workshops, and stated that, in addition to their trade classes, the demonstrations to architectural students of University College have been continued as in past years, and a manual training class has now, for the first time, been started for these students—"an innovation of the greatest importance to the architectural profession, and one which forms a link between our Schools and the University." In summing up his Report on the classes as a whole, Mr. Fletcher said, "I think that the output for the session in the different departments makes a very creditable exhibition of handicraft, more especially as applied to the requirements of to-day."

Sir Thomas G. Jackson, in presenting the prizes, etc., gained at the Carpenters' Company's Examinations in Sanitary Building Construction and in Carpentry, said it seemed to him a very interesting and happy idea to see the ancient City companies once more associated with the great trades from which they take their name and over which in former days they had almost absolute control. The Trades Training Schools were apparently a modern institution. They had taken the place of the old system of apprenticeship. A matter of the very greatest importance was the enjoyment of work, and he referred to what the Dean of St. Paul's said bearing on this subject in his address at the Carpenters' Hall last year, which he quoted as follows:—"The greatest joy in life is, I believe, the joy of making and producing something, something useful or beautiful, something which requires and draws out all the best qualities in a man's nature—something which we can put our whole selves into. It does not much matter whether it is work with the brains or with the hands, but I think that the ideal work is work which requires both brains and hands."

A vote of thanks to Sir Thos. Jackson was proposed by Mr. W. Hayward Pitman (Deputy), Past-Master, Painters' Company, which was seconded by Mr. F. L. Wiginton, Master of the Joiners' Company. A vote of thanks was also accorded to the Master of the Carpenters' Company, as chairman of the meeting, which was proposed by Mr. John Marsland, Master of the Tylers and Bricklayers' Company, and seconded by Mr. F. Costello, Master of the Plasterers' Company.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—The plans of the following new buildings have been approved of:—Office alterations, etc., Charlotte-street, for Messrs. Clark & Chapman, contractors; alterations, No. 124, Stanley-street, for the Northern Property, Land, and Investment Society, Ltd., per Mr. Marianus Lunan, manager; rifle-range and club-room, Broomhill-road, for the Aberdeen Miniature Rifle Club, per Mr. William Slora, jun., Bon-Accord-street; additions to premises on the north side of Frederick-street, per Mr. John Rust, architect; alterations, dwelling-house, Dee-street, for the trustees of the late Mr. Thomas Ogilvie, warehouseman, per Mr. W. J. Devlin, architect; alterations, etc., to factory, Rose-place, for Harrott & Co., Ltd., per Messrs. D. & J. R. M'Millan, architects; timber stores and lavatory, etc., Sinclair-road, in connection with the premises of Messrs. W. Fiddes & Son, Ltd., per Mr. John Rust, architect; cook shop, No. 493, George-street, for Mr. J. Donaldson, fruiterer, per Mr. George Watt, architect; additions to box and barrel factory, and reconstruction of boiler house at North Esplanade West, for Mr. Charles Lyon, box manufacturer, per Mr. W. E. Gauld, architect.

Aldershot.—Plans passed by the U.D.C.:—For a new bakehouse for Messrs. Gupny, High-street; for additions to a workshop in Alfred-street, for the Aldershot Mechanical Engineering Company; for a motor house, 76, Alexandra-road, for Mr. C. Tavender.

Amersham.—At a recent meeting of the R.D.C. plans of new buildings and of alterations and additions were approved for Chalfont St. Peter, Chesham Bois, The Lee, Prestwood, and Amersham Common.

Barnoldswick.—At a recent meeting of the U.D.C. plans of twenty-one cottages proposed to be erected off North Parade by Messrs. Procter, Barrett, & Sons, Ltd., were recommended for approval.

Barrow.—Messrs. Vickers, Ltd., have asked for an expression of opinion from the Health Committee with regard to draft plans which they have had prepared, on behalf of the Walney and Barrow Islands Public House Trust Company, Ltd., for a new hotel to be erected on Walney Island. The T.C. has approved of a number of new buildings, including power station, Cavendish Park, for Messrs. Vickers, cooling tower and new steel chimney at the electricity works; four cottages in Westmorland-street, for the executors of the late Mr. T. Brown; two lock-up shops in Euryalis-street, for Walney Housing Company; shop and dwelling-houses in Ainslie-street, for executors of Mr. T. Brown; and two dwelling-houses in West-avenue, for Mr. W. Tims.

Blackpool.—At a recent meeting of the Building Plans Committee plans for over forty new houses were approved.

Burryport.—The Health Committee has passed plans for two huts at Derwydd, for Mr. Owen Griffiths and Mr. T. Humphreys; four houses near Derwydd, for Mr. Faulkner; and a house at Colby-road.

Burston.—At a special meeting of the P.C. a resolution of thanks was proposed to the L.G.B. for their efforts on behalf of the parish with regard to the housing question, and stating that the Council is of opinion that steps can at once be taken to acquire the site, prepare plans, etc., for the necessary accommodation.

Chesham.—The U.C. has decided to pay £100 as an option upon land for building cottages, and to accept a tender of £185 for the erection of additional stabling.

Chesterfield.—Chesterfield Corporation has been recommended by the Electrical Energy Committee to connect the 400-kilowatt d.c. generator (which is being replaced with an alternator) to an a.c. motor, in order to give an additional plant capacity of 400 kilowatts, at an estimated cost of £1,800. It is also proposed to obtain an additional coke-breeze burning apparatus, at an estimated cost of £219, including equipment for four additional boilers and spare sets of bars.

China.—H.M. Consul at Tsinan (Mr. J. T. Pratt) reports that next year work will be commenced on the buildings of the Shantung Christian University, which is to be established in that city.

Clayton.—In accordance with the L.G.B.'s decision on the housing inquiry, the D.C. has prepared a housing scheme, and at their request a L.G.B. inspector has visited the suggested site.

Colombo.—It is proposed to construct a large building at Colombo for the use of all the railway headquarter offices, at a cost of Rs.50,000,000.

Coventry.—The City Council has approved of an arrangement with the Coventry Ordnance Works, Ltd., in reference to the construction of a railway siding across a portion of Stoke Heath.

Dover.—At a recent meeting of the St. Margaret's P.C. the proposed site for the public walk joining the Droveway, in connection with the Droveway scheme, was approved of, subject to the Clerk being satisfied that the public footpath is retained intact.

Dundee.—Plans and sections of proposed new buildings, etc., in Dundee have been lodged at the office of the City Engineer as follows:—North Lindsay-street, chimney for Halley Bros., Ltd.; Thomson-street, garage for Mr. Andrew Spreull.

Exeter.—The Sanitary Committee has recommended the Council to take action forthwith for the provision of a small-pox hospital for the needs of the city and the Exeter Port Sanitary Authority, and that they should be authorised to purchase a site at a cost of not more than £500.

Failsworth.—The L.G.B. has held an inquiry in respect to an application which the Council had made for a further loan of £1,169 for the purpose of providing public offices.

Folkestone.—Plans passed by the T.C.:—Plans submitted by Mr. G. Botting (owner) (Mr. J. Morgan, architect and builder), for additions (bay window in front and temporary shed at rear) at No. 53, Alexandra street; plans submitted by Messrs. F. J. Parsons, Ltd. (owners) (Mr. H. M. Jeffery, architect), for garage and house, The Bayle; plans submitted by Mr. W. B. Rees (owner) (Mr. C. D. Jenner, architect; Mr. C. Jenner, builder) for addition (conservatory and garage) at "The Gables," Shorncliffe-road; plans submitted by Miss Edden (owner) (Mr. C. D. Jenner, architect; Mr. C. Jenner, builder), for a temporary recreation-room at York House Nursing Home, Cheriton-gardens.

Glasgow.—The proposed purchase of Thornliebank Gasworks by Glasgow Corporation from the Calico Printers' Association is connected with an important tramway improvement on the Rouken Glen route at Spiersbridge corner. The matter has been reopened in connection with the proposed transfer of the gasworks. In the event of the sale being satisfactorily effected the Association will provide the ground necessary for the tramway improvement. Glasgow Dean of Guild Court has granted a lining to Messrs. Campbell, Achnach, & Co., Ltd., waterproof and indiarubber manufacturers, Commerce-street, to extend their premises in Wallace-street, South Side.

Grantham.—The Board of Education has finally approved the plans of the proposed new Roman Catholic School. The T.C. has approved plan of four houses in Huntingtower-road for Mr. H. H. Bowler.

Hawarden.—At a meeting of the R.C. a communication was read from a contractor engaged on work at the munitions works at Queensferry, asking permission to erect two bungalows or workmen's huts at Queensferry. Sanction was granted for the huts to be erected.

Heanor.—At a recent meeting of the Heanor Council the proposal to build a school for the teaching of technical engineering was again under consideration. It was proposed that the Heanor E.C. be requested to submit plans for the erection of an engineering workshop, that the Derbyshire E.C. be asked to consent to Mr. Widdows making the plans, and that the same authority be asked to what extent they are prepared to financially support the scheme. This was agreed to.

Hendon.—The D.C. has approved of the following plans:—Entrance porch, etc., Golder's Green Hippodrome, Mr. B. Crewe; block of cottage flats, east side of Erskine-hill, Mr. J. S. Soutar; water-closets, etc., for female staff inside depot at Golder's Green Station, the London Electric Railway Company; motor garage, Rodborough-road, Mr. P. Wilson; twenty houses, east and west sides of Hodford-road, Mr. C. W. B. Simmonds; garage, Boundary House, Wildwood-road, Mr. H. B. Silver; extension of road, "Meadway," the Hampstead Garden Suburb Trust; temporary building, east side of Queen's-road, Mr. J. C. Fairfax.

Huddersfield.—Sketch plans of a wooden building proposed to be erected by Mr. J. W.

* See also our list of Competitions, Contracts, etc., on page 450.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9½	9½	—	9	8	6½	6½	6½
Accrington	10	10	9½	9½	9	9	9½	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	7	7
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6½	6½	7½
Barnsley	9½	9½		9½	9	9	8½	7	7	7
Barrow-in-Furness.	9½	10	9½	9½	9½	9½	9½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6½	6½	6½
Bath	8½	8½	8½	8	7½	8	7½	6	6	6
Bedford	8	8	8	8½	8	9	6½	5½	5½	6
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	11½	11½	11½	11½	10½	11½	9½	8½	8½	8½
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	10	9½	10	9½	6½	7½	7½
Blackpool	10½	9½	9½	9½	8½	9½	8½	6	6	6
Bolton	10	10½	10	10½	10	10	9½	6–7	7	7
Bournemouth	8½	9	9	9	8½	9	8½	6½	6½	6½
Bradford	10	10	9½	9½	10	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	9	8½	8½	8½	—	8	7	6	6	6
Bristol	10½	10½	10½	10½	—	10½	9½	7½	7½	7½
Burnley	10	10½	9½	9½	8	9½	9½	7	7	7½
Burton-on-Trent	9	9	9	9½	9	9	8½	6½	6½	6½
Bury	10½	10½	10	9	9½	10	9	6	7	7
Cambridge	9½	9	9	9½	9½	9½	7½	6	6	6
Canterbury	8½	8	8	10	—	8½–9	7	5	5	5
Cardiff	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Chatham	8	9	9	9	9	9	7½	6	6	6
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	8½	8½	8½	8½	—	8½	8½	6	6	6
Chester	9½	10	10	9½	9½	9½	8½	6½	6½	7
Chesterfield	9	9	9	8	9	8½	8½	5½	5½	5½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	10½	10½	10½	10½	9½	10½	9½	7½	7½	7½
Crewe	7½	8	7½	9	8½	8	7½	5½	5½	6
Darlington	9½	10	10	10½	10	9½	8½	7	7	7
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9½	9½	9	9	9	9	8	6½	6½	7
Dudley	8½	8½	9	8½	8½	8	7½	5½	5½	6
Durham	9	9	9½	9	10	9	8½	6	6	6½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	8	8½	8	8½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7–7½	6½	6½	6½
Gloucester	8	8½	8½	8	8	8½	8	5¼	5¼	5½
Grantham	8	8	7½	7½–8	7½–8	7	6½	5	5	5
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9½	9	8	8½	7	7	7
Great Yarmouth	8	8	8	—	8	8	6½	5	5	—
Halifax	10	10	10	8½	8½	9	8½	7	7	7
Harrogate	9½	9½	9	9	8	9½	8½	6½	6½	6½
Hartlepools	9½	10½	10½	10½	10	10	9	7½	7½	8
Hastings	8½	8	8	8½	8	8	7	6½	5½	6½
Hereford	8	8	7½	8½	8	7	7	5½	5½	5½
Huddersfield	10	10	9½	9½	10	9	8½	7½	7½	7½
Hull	10½	10	10	10	10	10	8½	8	8	8
Ipswich	8½	8½	8½	9	9	8½	7	5½	5½	5½
Lancaster	10	10	9	9	9	9	9	6	6	6½
Leamington Spa	9	9	9	8½	9	9	8	6	6	6
Leeds	10	10	10	10	10	10	8½	7½	7½	7½
Leicester	10½	10	10	10½	10	10	9	7½	7½	7½
Lincoln	9	8½	8½	9	8½	8½	8	6	5½	6½
Liverpool	11	11	11	11	10½	11	9½	7	7	7
Llanelly	9½	9½	9½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	6½
Luton	9½	9	9	8½	9	8½	7½	6½	6½	6½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	11	11	11	11	10	11	9½	7½	7½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	9	8	6½	6½	6½
Middlesbrough	9½	10½	10½	10½	10	10	8½	7½	7½	8
Newcastle-on-Tyne	11	11	11	11	10	10	9½	7½	7½	7½
Newport, Mon.	10	10	10	10	8½	10	9	7	7	7
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8½	8½	8½	8½	8	8½	7½	6	6	6
Nottingham	10	10	10	10½	9½	10	9	7½	7½	8
Oldham	10½	10½	10½	10	9	10	9½	7	7	7½
Oxford	9½	9	9	9	8	9	8	6½	6½	6½
Plymouth	9	9	9	9	9	9	8	6½	6½	6½
Pontypridd	9½	9	9	9½	9	9	8	6½	6½	6½
Portsmouth	9½	9½	9½	9½	—	8½	7½	7	7	7
Preston	10½	10½	10	9½	9½	10	9½	6	7	7½
Reading	8½	9	9	9½	—	9	7½	6	6	6
Rochdale	10½	10½	10	10	8½	10	9	7	7	7½
Rochester	8	9	9	9	9	8½	7½	6	6	6
Rugby	9½	9½	9½	9½	8	9½	8½	6	6	6
St. Albans	9	9	9	9–10	9	9–10	8	6½	6	6½
St. Helens	9	9½	10	9½	9½	9½	9½	6	6½	6
Scarborough	9	9½	9	8½	8	9	8	7	7	7
Sheffield	10½	9½	9½	9½	9½	10	8½	6½	6½	6½
Shrewsbury	8½	8½	8½	9½	—	8½	7	5½	5½	5½
Southampton	8½	9½	9½	8½	—	9½	8½	6½	6½	6½
Southend-on-Sea	9	9	9	9	P'cework	9	7	6	6	6
Southport	10	10	9½	9½	9½	9½	9½	6½	7	7
South Shields	11	11	11	11	10	8½	9½	7½	7½	7½
Stockport	10½	10	10	10½	9½	10	9½	6	6½	7½
Stockton-on-Tees	9½	10½	10½	10½	10	10	9	7½	7½	8
Stoke-on-Trent	9	9½	9	9	—	8½	8½	6	6	—
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Sunderland	10½	11	10½	10	10	9	9½	7½	7½	7½
Swansea	9½	9½	9½	9½	8½	9	9	6½	6½	6½
Taunton	7	7	7	7	—	6	6½	4½	4½	4½
Torquay	8	8	8	8	8	8	8	6	6	6
Wakefield	9½	9½	9	9½	8½	9	8	7	7	7
Walsall	9½	9	9	9	8½	10	8	6½	6½	6½
Warrington	8½	10½	10½	10½	8½	10½	9½	6½	6½	6½
West Bromwich	10	10	10	10½	—	9	8	7	7	7
Wigan	10	10½	9½	9½	9	9½	9½	7	7	7
Windsor	9	9	9	10	—	9	—	6	6	6
Wolverhampton	9½	9½	9½	10	8	10	8	6½	6½	6½
Worcester	8½	9	9	9	9	9	7½	6	6	6
York	9½	9½	9	9½	9½	9	8½	7	7	7

The masons' rate given is for bankers; fixers usually ½d. per hour extra.

Clegg, of Pisgah Farm, have been approved. Plans for a shed proposed to be erected by the executors of Mr. E. L. Kaye at Low Farm, and stable and storehouse by Hinchcliffe Bretton at Huntroyd East, have been sealed.

Langley.—A scheme has been prepared for solving the housing difficulty in the district. The scheme provides for the development of a freehold estate of about 44 acres, having frontages to Darly-road and Bason's-lane, Langley, and extending to Victoria-road, West Smethwick. There is room on the estate for the erection of over 300 houses of modern design and convenience, after allowing spaces for a playing field and allotments.

Leyland.—Plans approved by the U.D.C.:—Proposed new surgical building for the Leyland and Birmingham Rubber Company, Ltd.; proposed tyre-room and laboratory for the Wood Milne Company, Ltd.; and proposed rubber store and drying-room for the same firm.

Linton.—The D.C. has accepted a tender for the construction of Woodside Bridge, at a cost of £62.

London.—Proposals are to be made to the East London Railway Company by the Stepney Borough Council. In order to relieve the pressure, the Works Committee of the Council propose that a new station should be constructed at the point where the railway cuts under Commercial-road. Another suggestion for the improvement of travelling facilities on this line involves lift accommodation to the street and to the Great Eastern Railway levels at the Shadwell station in Watney-street. It is proposed to install a new heating apparatus and electric lighting system in St. Benet's Church, Mile End, at an estimated cost of £550.

Loughborough.—Plans passed by the T.C.:—Extension of factory premises, Nottingham-road, for Messrs. I. & R. Morley; four houses, Garton-road, for Messrs. F. Read & Son; Mission Room, Knightthorpe-road, for trustees of the Primitive Methodist Chapel; drying-room, Providence Dye Works, Rendell-street, for Messrs. W. Lacey & Co.; extension of erecting shop, Empress Works, for Herbert Morris, Ltd.; annex to hospital, Baxter-gate, for the Hospital Governors.

Newport (Mon.).—Messrs. Houlder Brothers, steamship owners, have started laying the foundations of another large warehouse at the South Dock, Newport. It will cover an area of 400 ft. by 60 ft.

New Zealand.—H.M. Trade Commissioner for New Zealand (Mr. W. G. Wickham) has forwarded extracts from the local Press, from which the following particulars are taken:—The estimates for the year 1915-16 submitted to the New Zealand Parliament by the Minister of Public Works on October 1 include the following items:—Railway construction, £700,000, and additions to open lines, £500,000; bridge construction and maintenance, £500,000; telegraph extension, £327,000; public buildings, £427,050.

Nuneaton.—At a recent meeting of the T.C. the Electricity Committee reported the receipt from the L.G.B. of a letter with reference to the application for sanction to raise a loan of £10,000 for extensions, stating that after further consideration the Board would not take exception to the Council entering into definite contracts for the extension of plant.

Ormskirk.—The U.D.C., having considered the question of sites on which it is proposed to build fifty cottages, has agreed to a site off Aughton-street, where the land is owned by Lord Derby.

Ramsgate.—The T.C. has passed plans for alterations and additions to Highlands, Southwood-road (owner, Miss Crowley).

Rotherham.—Messrs. Steel, Peech, & Tozer, Ltd., have purchased the whole of the Templeboro' site, including the site of the Roman camp, for the purpose of works.

Runcorn.—Plans were passed at a recent meeting of the U.C. for the temporary extension of the Cottage Hospital for the accommodation of a further twenty-five wounded soldiers. This extension will cost £500.

Scarborough.—£5,000 has now been obtained towards the fund for the building of a new church at St. Columba, Scarborough.

Shoreham.—An application has been received by the Board of Trade from Messrs. J. Eversbed & Son for permission to construct a wharf, part of which will be below high-water mark on the north side of the River Adur.

Spain.—The *Gaceta* of November 27 contains a notice to the effect that tenders will be received, within a period of thirty days from that date, at the "Casa Consistorial," Valencia, for the construction of a building required for the municipal authorities in the district of Ruzafa in that city. The estimated cost of the undertaking is at least 54,124 pesetas (about £2,160).

Stroud.—The U.D.C. has approved of a plan submitted by Messrs. P. Ford & Son, on behalf of the Cheltenham Original Brewery Company, for alterations at the Crown Hotel premises, The Cross.

Tamworth.—The R.D.C. has passed plans of two houses for Mr. Willdig, in Woodhouse-lane, Amington, and two houses in Amington-road, Bolehall, for Mr. T. Barlow.

Uppingham.—The R.D.C. has passed the plan of a rifle-range at Uppingham School, Leicester.

Watford.—Plans passed by the U.D.C.:—Additions to offices, 85, High-street, for Messrs. Kingham & Co., Ltd.; new vicarage adjoining church, for trustees of St. Mary's Church; recreation-rooms to V.A.D. Hospital, Lady's Close, for Mrs. L. A. Morten Turner; business premises, 124, High-street, for Mr. S. H. Timms;

IMPORTANT.

If you are experiencing difficulty in the delivery of your structural steelwork, please note that we have 1,500 tons of bars for re-inforced concrete work lying at our Trafford Park Works for immediate delivery.

THE TRUSSED CONCRETE STEEL CO., LTD.,

52, Caxton House, Westminster, S.W.

new sheds, Whippendell-road, for Messrs. Nicole, Neilson, & Co., Ltd.; four houses, Windsor-road, for Messrs. Bracey & Clark; detached house, Leavesden-road, for Mr. Pearce.

West Hartlepool.—The T.C. has approved the following plans: Mr. J. Bottomley, addition to workshop, Villiers-street; Messrs. Batchelor & Co., messroom at works, off Windermere-road; Mr. J. R. Patton, addition of kitchen, scullery, etc., to house, 6, South-parade; Messrs. W. T. Walton & Son, alteration of premises, 3, Church-street; Messrs. W. Pearson & Co., extension of office premises, Middleton; Mr. H. Doyle, alteration of dwelling-house, 17, Hope-street; Mr. D. Reid, temporary greenhouse, Thornhill-gardens; Mr. Atkinson, motor shed, Linden-grove.

Winchester.—The City Council has passed the following plans:—Messrs. Dumpers, Ltd., alterations and improvements to the Market House; Mr. B. D. Canceller, proposed motor garage in City-road.

Wyken (Warwickshire).—At the earnest request of the Minister of Munitions, the Plans Committee of Foleshill D.C. has approved the plans for 600 houses in the parish of Wyken, which are being erected specially for munition makers engaged in Coventry factories.

GENERAL BUILDING NEWS.

STYAL COTTAGE HOMES, MANCHESTER.

The Bishop of Chester recently dedicated the new chapel of the Styal Cottage Homes. There is seating accommodation for 618 in the new building, and the children in the homes now number 509. The chapel has cost about £4,000, and is built in the old Cheshire style of brick and half-timber work, with a roof of red sand-faced tiles. The architect was Mr. F. H. Overmann, of King-street, Manchester. The contractors were:—For the building, Messrs. Burgess & Gault, Ardwick; heating, Messrs. Saunders & Taylor; electric lighting, Mr. O'Brien. The whole institution is lighted by electricity, the current being generated on the premises.

TRADE NEWS.

We learn that the well of a lift at Haslingden, which has hitherto been flooded, has been made dry with Pudloed cement.

The Connaught Hall, Worthing, is being ventilated by means of Shorland's exhaust roof ventilators, electric fans, and special inlet ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

The Boyle system of ventilation (natural), embracing Boyle's latest patent air-pump ventilators and air inlets, has been applied to Wallingbrook School, Chulmleigh.

REGISTERED PLUMBERS.

The following is a list of the plumbers registered for the last two months:—R. G. Simmonds, New Southgate; A. S. Reid, Tottenham, N.; A. A. Warren, Lyme Regis, Dorset; C. H. Brown, Minories, E.C.; E. W. Haskard, Leicester; C. Jones, West Ham; H. G. Ottrey, Windsor; F. Davison, Derby; G. D. Fidgen, Lower Clapton, N.E.; G. B. Garland, Penge; A. Harvey, East Molesey; A. E. Lister, Walthamstow; A. Myers, Eastwood, Notts; E. Tealby, Sharnbrook; F. Hibbert, Westhoughton.

CHANGE OF ADDRESS.

Messrs. Henry Faija & Co., after having been established at the Portland Cement-Testing Works and Chemical Laboratories, 41, Old Queen-street, Westminster, some thirty-five years, have secured larger and more commodious laboratories, and on and after December 25 next their address will be 6, Earl-street, Westminster, S.W.

PATENTS.

APPLICATIONS PUBLISHED.*

22,420 of 1914.—John Bradbury Bent: Hot-water systems for heating buildings and the like.

23,533 of 1914.—Hugh Millar MacMillan: Air-pressure apparatus for use in spraying or discharging paint, granulated cork, and other materials.

23,538 of 1914.—John Pearce Roe: Elevated ropeways.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

24,289 of 1914.—Arthur McDougal Duckham: Retort-houses.

24,652 of 1914.—Marshall Allan Holmes: Glazing of roofs.

997 of 1915.—Arthur George Hopkins: Petrol-proof paint.

1,236 of 1915.—Walter Thomson: Ladders.

3,444 of 1915.—William John Stewart: Means for constructing pile foundations.

4,473 of 1915.—Edward Charles Robert Marks (Devilbiss Manufacturing Company, U.S.).

4,612 of 1915.—Daniel Walter: Door or other bolt.

4,680 of 1915.—Soc. Odelin et Cie: Boilers for hot-water circulation heating systems and for other purposes.

5,177 of 1915.—Richard Ames: Foundations for roads.

5,479 of 1915.—J. & C. G. Bolinders Mekaniska Verkstads Aktiebolag: Feeding means for wood-planing machines, edging machines, and the like.

5,585 of 1915.—George Hall and Leslie Ward Goddard: Vertically-pivoted window sashes and the like.

5,651 of 1915.—Moritz Kahn: Metal fabrics, for use in ferro-concrete construction.

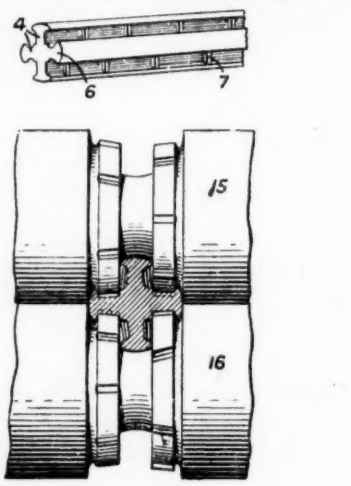
5,952 of 1915.—Lindholmens Verkstads Aktiebolag & Christoffer Wilhelm Hök: Cranes particularly adapted for use in shipyards.

6,207 of 1915.—Karl Rudolph Schuster: Concrete mixers.

SELECTED PATENTS.

10,353 of 1914.—Patrick Henry Kane: Concrete reinforcing bars.

This relates to bars for reinforcing concrete, which are rolled with four or more webs 4, each having a head 6 for the whole length, and

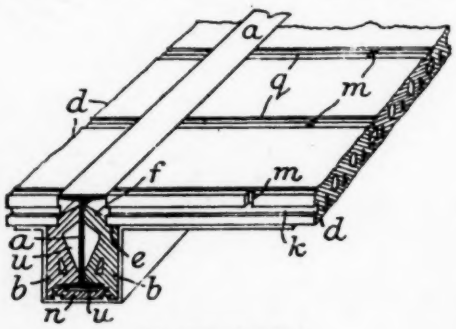


10,353 of 1914.

lateral ribs 7, or grooves, or both, to key with the concrete. For bars of cruciform or like shape a blank is first rolled, and is then passed through finishing-rolls 15, 16 to form the heads, ribs, and grooves.

10,439 of 1914.—George Anderton: Floors.

This relates to floors in which slabs are supported by haunch blocks *b*, which are seated on the lower flanges of metal joists *a*, and are formed with shoulders *f* to bear against the webs and with rabbets *e* to receive the floor slabs. The soffits of the joists are protected by slabs *n*, which have tongues engaging

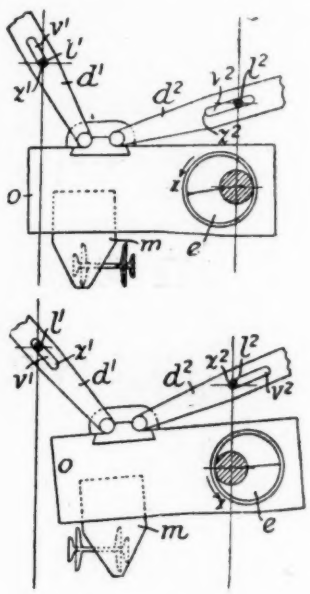


10,439 of 1914.

grooves in the blocks *b*. The slabs *d* and blocks *b* are made of concrete or like material, and may be hollow or solid. The slabs may be reinforced, and are grouted together, the grouting being introduced through holes *m* into grooves *k*. Keying-grooves *q* are provided on the top and bottom faces of the floor slabs and the bottom faces of the slabs *n* to secure the floor and ceiling finishing-layer. Each block *b* may support one or more slabs *d*, and slabs on opposite sides of a joist may be connected by rods passing over or through the joists The air spaces *u* may be omitted.

10,537 of 1914.—Berliner-Erfurter Maschinenfabrik: Messrs. Henry Pels & Co.: Cutting girders.

This relates to machines for severing sectional iron girders by cutting a slot across them by means of a number of fixed cutters and a single moving cutter such as *m*, which is mounted in a member *o* operated by an eccentric

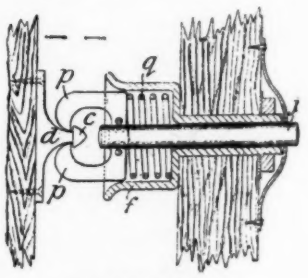


10,537 of 1914.

e and controlled by a pair of alternately operative slotted links 1^1, 1^2. The member *o* is provided with means to impart a tendency to rise, so that the bolts 1^1, 1^2 engage the lower ends z^1, z^2 of the slots v^1, v^2; but as the eccentric rotates, first the link d^2 and then the link d^1 become inoperative, the operative link coacting with the member *b* to form a toggle. The cutter *m* is thus first moved downwards and to the left, and then to the right, completely severing the girder.

10,599 of 1914.—William Denham Verschoyle.—Door and like holders.

This relates to a door or like holder in which a pair of levers *p* are mounted in a casing *f* on the door and have hooked ends adapted to ride over the head of the stud *d* against the action of a spring *q*. The other ends of the



10,599 of 1914

levers engage a slot or recess in a plunger *f* passing through the door. The plunger may be provided with a shoulder to prevent it from being drawn through the door, in which case its end acts against the levers, and the slot is omitted. The sides of the stud *d* are curved to act as a buffer if the door should be opened violently.

LAW REPORTS.

KING'S BENCH DIVISION.
(Before Mr. Justice SCRUTTON.)

Defective Roof: Landlord's Obligations.
The Executors of W. G. Hart *v.* Rogers.

IN this case, heard on the 3rd inst., the plaintiff brought an action to recover from the defendant two quarters' rent of a suite of furnished rooms in Moscow-mansions, Cromwell-road, of which the late Mr. W. G. Hart was the landlord. This gentleman let the flat to the defendant, Mr. Rogers, for one year, under an agreement in writing dated May 25, 1914. The agreement provided that the rent (£180) was to be payable quarterly, and at the end of the tenancy Mr. Rogers was to pay £20 for dilapidations. Mr. Rogers alleged that Mr. Hart, the landlord, retained control of the roof, and, owing to his negligence to repair it, water percolated through the roof into the flat, which rendered it unfit for habitation, and in consequence of which Mrs. Rogers (the defendant's wife) became ill, with the result that Mr. Rogers had to find another house on March 25, 1915. Mr. Rogers, in these circumstances, counterclaimed for damages in respect of his wife's illness.

At the conclusion of the arguments of counsel, his Lordship, in a considered judgment, held that the roof was not under the control of the tenant, but was under the control of the landlord, and that the defect which caused the damage was not in a part of the roof included in the demise. The question, which was one of general interest, was what was the legal obligation imposed on the landlord in respect of the roof? It was clear, said his Lordship, that ordinarily the lessor of an unfurnished house does not impliedly warrant that it is fit for occupation, and that the lessor of a furnished house or apartment does impliedly warrant that it is fit for human occupation at the beginning of the tenancy. What, then, was the position where the landlord retained in his own possession and control something essential to the enjoyment of the premises demised, such as a staircase or a roof?

His Lordship, having referred to the decided cases bearing on the point, proceeded to deal with the present case upon the footing that there was only an implied duty on the landlord to use reasonable care in repair. Having discussed the facts, he came to the conclusion that the illness of the defendant's wife was not caused by the water coming through the roof, and that the leakage was not caused by the landlord's negligence. He was unable to see any principle on which the facts gave the tenant an answer to the whole claim for rent. He therefore held that the plaintiff's claim succeeded as to the rent and dilapidations, but he saw no ground for making the defendant liable for the second quarter's telephone and electric light. His Lordship accordingly entered judgment for the plaintiff on the claim for £114 13s. 6d.

As to the defendant's counterclaim, his Lordship said he was not satisfied that his wife's illness was caused by the leakage, and he should in no circumstances have given him the extra cost of the summer holiday at Maidenhead seven months after. He should have given him, if he had moved after the first leakage, the cost of substituted lodgings until the premises were fit again; as he did not move, he (his Lordship) allowed him something for discomfort and interference with his tenancy till February 25, and from February 25 to March 25, when the premises, because of the two leaks, were not reasonably inhabitable. He should allow the defendant the cost of substituted rooms, and he therefore gave him in all £25 damages on the counterclaim, with costs.

His Lordship, in concluding his judgment, said that if the true view of the relation of this landlord and tenant was that the landlord only contracted to use reasonable care to keep the roof in repair, he had found no negligence in this case, and on that construction the plaintiff would have had judgment on the counterclaim, with costs. While the state of the law as to the letting of unfurnished premises was, in his opinion, unsatisfactory, the remedy must come from the legislature and not from the judges.

Mr. Disturnal, K.C., and Mr. Morle (instructed by Messrs. Boyce & Evans) appeared for the plaintiffs; and Mr. Rose Innes, K.C., and Mr. Frank Dodd (instructed by Messrs. Tatham & Co.) for the defendant.

Surveyor's Claim for Architect's Fees.

ON Wednesday, December 1, before his Honour Sir W. Lucius Selfe, in the Marylebone County Court, Mr. Reginald Charles Hassett, surveyor, 42, High-road, Kilburn, claimed £38 2s. from Mr. G. M. Goodwin, builder, Kilburn, in connection with the erection of the Willesden Green Electric Theatre.

Mr. Arthur Crust (Messrs. Porter & Crust), for the plaintiff, said that Mr. Goodwin, having a piece of empty freehold land, proposed to erect thereon a cinema theatre, and himself prepared a rough plan of the building. He produced this to Mr. Hassett, who was at the time (October, 1909) doing other work for him, and Mr. Hassett saying that the District Council would not pass it, Mr. Goodwin instructed him to get out plans which would meet the views of the Council's Surveyor. He did so, and, these not being sanctioned, others were prepared and sent in, and these were passed. Defendant decided, instead of running the show himself, to lease it to a tenant, and in pursuance of this resolve instructed Mr. Hassett to find a tenant. Mr. John Henderson, Cumberland-mansions, Marble Arch, chairman of the Anglo-American Cinema Trust, was introduced by Mr. Hassett to Mr. Goodwin, and on the revised plans being submitted to him he declared the proposed house to be too small. Mr. Hassett was thereupon instructed by Mr. Goodwin to prepare further plans, and, this being done and the Council having approved them, the building was commenced by Mr. Goodwin. The contract was for building only, and Mr. Hassett was appointed to take charge of the decorations and furnishing. In the course of the building operations Mr. Goodwin had to consult Mr. Hassett on a number of matters, and the former advised him, and drew detail plans to meet the alterations that were made during the progress of the work—drains and a false roof, as well as details of principal on which an iron outer roof was to rest. Plaintiff estimated that the cost of the building was £800, and he claimed 2½ per cent. on that amount, 7½ per cent. on the rental, £200, for twenty-one years' lease, and other small items.

Plaintiff gave evidence in support of this statement. Answering Mr. C. M. Knowles, counsel for the defendant, plaintiff said that he acted as architect for the defendant, although he was not a member of the Institute. He was the agent of the syndicate for the decoration and furnishing of the building. When the building was completed the syndicate paid him £60 in shares for his work "*re* architect and for his assistance in connection with the building." He had signed the Articles of Association of the syndicate "in a friendly way," and was a director and secretary thereof.

His Honour: And what about the plans?

Plaintiff: I got into very hot water with the Willesden Council for allowing the building to be erected not in accordance with the deposited plans. Mr. Goodwin would build in his own way, and there were constant complaints and alterations.

Mr. Henderson said that the enlarged plans were prepared at the request of Mr. Goodwin, who was to build the theatre, and the syndicate to decorate and furnish it. Mr. Hassett was employed by the syndicate to superintend the latter work, and was paid with sixty £1 shares. The syndicate never instructed Mr. Hassett to prepare any plans in connection with the building. He had no knowledge of the defendant until Mr. Goodwin was introduced by Mr. Hassett, who acted as owner's architect so far as the building was concerned, and for the syndicate so far as the decoration and furnishing were concerned.

For the defence, Mr. Goodwin said that he was a practical builder, and could have built this theatre without any plans. The delays and alterations in building arose because Mr. Hassett's plans were impracticable. He gave no instructions to have plans prepared for the District Council, and Mr. Hassett did this to meet the views of the syndicate. His work on the building with materials cost £500, not £800.

His Honour, giving judgment, quoted from defendant's letter to the syndicate, in which he wrote: "I hereby agree to erect for the purposes of a theatre a building on land of which I am the owner, according to plans prepared by Mr. Hassett and approved by you, and also passed by the Local Authority." That meant that the plans were prepared for the defendant. He allowed commission on £500 for the building, not on £800, and gave judgment for £23 2s., with the costs.

A Builder's Contract.

AT Watford County Court recently his Honour Judge Scully heard the case of Booth *v.* White. The plaintiff, Mr. Horace Charles Booth, of Mill Hill, a builder, claimed £63 5s. 1d. for work done to the residence of Mr. Frederick White, an architect and surveyor, of 17, Kenton-road, Harrow.

Mr. J. D. Cassels (instructed by Mr. Vincent Howells, Harrow) appeared for the plaintiff, and Mr. Bell Hart (instructed by Mr. J. C. Brookhouse) for the defendant.

Mr. Cassels stated the facts at the opening of the case to be as follows:—The trouble was about the construction of a dormer window between two chimney-stacks of the defendant's residence. The dormer windows built with the house were of wooden construction, with ordinary roofing on the top. In January, when the defendant saw this house in Kenton-road, it was practically complete and had two dormer windows. Defendant negotiated for the purchase of the house, and finally agreed to pay plaintiff £900 if he would put in the roof an extra dormer window. The contract was to put in an extra dormer window, but the dormer window which had been constructed, and out of which this dispute had arisen, was a window made with brick, with a large fireplace in it and a chimney outside, and containing not one window, but six.

His Honour: Is it a separate room?

Mr. Cassels: It is almost a self-contained flat. It was 8 ft. 6 in. broad by 5 ft., and was part of an extensive and elaborate billiard-room with a boxroom on one side.

Mr. Cassels said that upon very difficult strokes the cue came into contact with part of the extension. This being constructed after the house was built necessitated a good deal of cutting away, and it meant raising the chimney-stacks, also removing a cistern.

When the work was started and the necessary scaffolding put up, the defendant changed his mind and wanted the thing made 18 in. wider. This necessitated putting up additional scaffolding. It was curious that in this dispute the defendant, who was an architect and acted as his own architect, should find himself in an action of this kind. The important clause of the contract was: "Partition the top floor into two rooms and put an extra dormer window in the east side of the roof." The contract being signed, plaintiff wrote a letter to defendant, asking him for the dimensions of the extra dormer window, and in response to this defendant wrote and asked plaintiff to come and see him. When plaintiff called at the defendant's office he was handed a plan, showing what he (Mr. White) required. When plaintiff saw the plan he at once realised that the work entailed in the alteration was very different from what was described in the contract as a "dormer window." He never thought that there would be six windows, but that only one was wanted, nor that scaffolding would be required for the work, which was 30 ft. from the ground. In constructing the extra dormer window, all that was necessary would have been a few planks thrown out from the window already there. In addition to this, a fireplace was wanted, and, although Mr. White offered to throw in a stove, plaintiff could not throw in a chimney as well. Mr. White had made the mistake of putting a chimney upon a 9-in. brick wall. Mr. Booth pointed this out, and told defendant that he never anticipated doing brickwork for the dormer window. Defendant asked the cost of the extra work, and Mr. Booth said £15. Mr. White offered £7 10s., and plaintiff refused. Mr. White then said that he would have to have the work measured up. The work was done, and defendant watched its progress from beginning to end. Then he wanted a few bricks left down to get his billiard table into the room; in fact, it was built round the billiard table, and goodness knows how he would get it out again! Defendant also had the corners of the inglenook cut away, because he could not get his cue in a certain position, and he ordered two extra trapdoors in the roof. Plaintiff was not making any profit out of the work, and the charges were perfectly fair and reasonable. There were other small items for electrical fittings and alterations. One item of £1 10s. was for unloading the billiard table, and defendant wrote a letter suggesting that it should only be a few shillings. To lift the billiard table a large pulley had to be erected 35 ft. from the ground, and the pulleys weighed half a hundredweight. The table had to be hauled up, and it took three men a long time to get it into the room.

The case was finally adjourned to another Court.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, vi.; Public Appointments, —; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

DECEMBER 18.—**Trewidden.**—ADDITIONS AND ALTERATIONS.—For additional wing and alterations to farmhouse at Trewidden. Plans and specifications prepared by Mr. H. White, F.R.I.B.A., may be inspected at the offices of Messrs. Borlase & Venning, solicitors, 58, Morrab-road, Penzance.

DECEMBER 19.—**Bexhill.**—OBSERVATION PAVILION.—For the erection of observation pavilion in St. Mary's-road for the Corporation. Plans, etc., of Mr. George Ball, Assoc.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall.

DECEMBER 20.—**Oxford.**—REPAIRS.—For work required to be done during the ensuing year:—Builder (for repairs only), for the Corporation, shoeing smith. Mr. Richard Bacon, Town Clerk, Town Clerk's Office, Town Hall, Oxford.

DECEMBER 21.—**Hunslet.**—BRICKLAYERS', ETC., WORK.—For bricklayers', joiners', plumbers', and ironmongers' work, for the Guardians of the Poor of the Hunslet Union, for three months from January 1 next. Tenders of Mr. Fred W. Mee, Clerk to the Guardians, Union Offices, Glasshouse-street, Hunslet.

DECEMBER 22.—**Aberystwyth.**—ALTERATIONS.—For making alterations to No. 37, Terrace-road, Aberystwyth, for Messrs. Thomas Ellis & Co. Plans, etc., of the architect, Mr. G. T. Bassett, A.R.I.B.A., architect and surveyor, North-parade, Aberystwyth.

DECEMBER 22.—**Dundee.**—CATTLE DEPOT.—The Trustees of the Harbour of Dundee invite tenders for the construction at the Cattle Depot, Dundee Harbour, of a steel-framed shed, covered with black corrugated sheet steel, about 140 ft. 3½ in. long by 85 ft. 1 in. wide. Plans, etc., of Mr J. Hannay Thompson, M.Inst.C.E., General Manager and Engineer, Harbour Chambers, Dundee.

DECEMBER 23.—**Swindon.**—ALTERATIONS AND ADDITIONS.—For alterations and additions to the cottage at the Coate Reservoir, Swindon. Plans, etc., of Mr. H. J. Hamp, Borough Surveyor, Town Hall, Swindon.

DECEMBER 24.—**Manchester.**—EXTENSIONS.—Extensions of the Gas Stove Repair Department, Gleden-street, Bradford-road, for the Gas Committee. Specification, etc., of the City Architect, Town Hall, upon payment to the City Treasurer of £1 1s. deposit.

JANUARY 10, 1916.—**Edinburgh.**—REPAIRS AND MATERIALS.—Tenders are required for repairs and materials from February 1, 1916, to March 31, 1917, in the Lowlands Engineer District of the Scottish Command. Forms of tender, etc., of G. Le Breton Simmons, Lieut.-Colonel, R.E., Commanding Royal Engineer, Forth Defences and Lowlands, Royal Engineer Office, 5, Drumsheugh-gardens, Edinburgh.

FURNITURE, MATERIALS, etc.

DECEMBER 20.—**Fulbourn (Cambs).**—OILS, ETC.—Supply to the Committee of Visitors of oils and oil colours, glass, etc., for six calendar months from January 1 next. Forms of tender of the Steward, Cambridge County Lunatic Asylum, Fulbourn, Cambs.

DECEMBER 20.—**Glasgow.**—FIREBRICKS, ETC.—Supply to the Corporation of firebricks, fireclay, and fireclay retorts at their gas works for a period of twelve months from January 1, 1916. Specifications, etc., of Mr. Alex. Wilson, Engineer, 45, John-street.

DECEMBER 20.—**Ipswich.**—PAINTERS' SUNDRIES.—Supply to the Guardians of painters' sundries to the Workhouse, St. John's Home, and to the outdoor poor, for three months from January 1, 1916. Forms of tender of Mr. L. W. Greenhalgh, Clerk to the Guardians, Guardians' Offices, 19, Tower-street, Ipswich.

DECEMBER 21.—**London.**—BUILDERS' MATERIALS.—Supply to the Guardians of the Poor of the Hamlet of Mile End Old Town at their several establishments, situate in Bancroft-road, London, E., and elsewhere, for the period ending at March 31, 1916, of builders' materials. Forms of tender of Mr. Benjamin Catmur, Clerk to the Guardians, Guardians' Offices, Bancroft-road, Mile End, London, E.

DECEMBER 24.—**Edinburgh.**—GLASS, ETC.—Supply to the Commissioners of Northern Lighthouses for the year 1916 of window glass, planks, and ladders. Tender forms of the Superintendent, 84, George-street, Edinburgh.

DECEMBER 27.—**Sandwich.**—PAINTERS' MATERIALS, ETC.—Supply to the Guardians of Eastry Union for three months, from January 1, 1916, to March 31, 1916, of engineers' and painters' materials and timber. Forms of tender, etc., of the Master of the Workhouse at Eastry.

DECEMBER 28.—**Dover.**—BUILDERS' MATERIALS.—Supply to the T.C. of materials and labour in the following trades for the period of six months from January 1, 1916, to June 30, 1916:—Bricklayer, carpenter, ironmonger, founder, smith, painter, glazier, and plumber. Forms of tender, etc., of Mr. R. E. Knocker, Town Clerk, Town Clerk's Office, 69, Castle-street, Dover.

JANUARY 5, 1916.—**Isle of Wight.**—GRANITE.—Supply to the Isle of Wight R.D.C. of 150 tons of 1½-in. granite. Mr. H. Eldridge Stratton, Clerk, Rural District Council Offices, 30, Pyle-street, Newport, I.W.

ENGINEERING, IRON, AND STEEL.

DECEMBER 18.—**Sowerby Bridge.**—FENCING, ETC.—Supply to the U.D.C. of 145 yds. of wrought-iron and steel fencing, gates, etc. Particulars of Mr. Jas. Eastwood, A.M.Inst.D.E., Surveyor, Council Offices, Sowerby Bridge.

DECEMBER 18.—**Ystradgynlais.**—IRON AND STEEL, ETC.—Supply to the South Wales Anthracite Colliery Company, Ltd., over the year 1916 of iron and steel, etc. Tender forms of Mr. T. E. Slater, Ystradgynlais.

DECEMBER 29.—**Oxford.**—IRONMONGERY, ETC.—Supply to the Corporation of ironmongery, castings and wrought-iron work, oils, and paints. Form of tender, etc., of the City Engineer, Office, Town Hall.

JANUARY 12, 1916.—**Victoria.**—STEEL RAILS, ETC.—Supply to the Agent-General for Victoria, Australia, of the following:—Contract No. 28,685.—Approximately 2,000 tons 60-lb. steel rails, approximately 100 tons fishplates. Specifications, etc., of the consulting engineers, Messrs. John Coates & Co., Ltd., 115, Victoria-street, London, S.W.

ROAD, SANITARY, AND WATER WORKS.

DECEMBER 30.—**Somerset.**—SURFACE TARRING.—For surface tarring on main roads at various places in the county during the year 1916, for the C.C. Forms of tender of Mr. Gordon R. Folland, Acting County Surveyor, County Surveyor's Office, Wells.

NO DATE.—**Edinburgh.**—FARM ROADS.—For forming farm roads in connection with Ballencrieff Small Holdings Scheme near Drem. Material supplied. Particulars of Inspector at Drem, or Secretary, Board of Agriculture for Scotland, 29, St. Andew-square, Edinburgh.

Auction Sale.

JANUARY 12, 1916.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

NEW COMPANIES.

THE undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.

DITTON VITRIOL COMPANY, LTD. (142,182). Registered November 19. To carry on business of acid manufacturers and to build, construct, maintain, or enlarge buildings, factories, mills, wharves, railways, or tramways, machinery, engines, sluices, or watercourses, to control the same or join with others in doing so. Nominal capital, £15,000 in 450 £10 Ordinary shares, and 1,050 £10 Preference shares.

JAMES ROGERSON & SONS, LTD. (142,226), 30 and 32, Brazenose-road, Bootle, Lancs. Registered November 20. To acquire and take over the business now carried on by James Rogerson at above address, and to enter into an agreement and to carry on the business of ship repairers, manufacturers of refrigerators, contractors and builders, timber merchants, saw mill proprietors, painters and cabinet makers, plumbers, electric light, gas, water, and sanitary engineers, dealers in bricks, sand, cement, terra-cotta, pipes, pottery, and earthenware, etc. Nominal capital, £8,000 in 8,000 £1 shares.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to THE BUILDER LTD., and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply it acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

[Those with an asterisk (*) are advertised in this issue.

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.]

Since our last issue lead prices have been reduced and oils increased.—ED.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River Thames.	£	s.	d.
Best Stocks	2	0	0
Picked Stocks for Facings	2	15	0

Per 1000, Delivered at Railway Depôt, London.

	£	s.	d.		£	s.	d.
Flettons	1	16	0	Best Blue Pressed Staffordshire	3	15	0
Best Fareham Red	3	12	0	Do. Bullnose	4	0	0
Best Red Pressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

GLAZED BRICKS—

	£	s.	d.		£	s.	d.
Best White, Ivory, and Salt Glazed Stretchers	13	0	0	D'ble Str'tch'rs	18	10	0
				Double Headers	15	10	0
				One Side and two Ends	19	10	0
Headers	12	10	0	Two Sides and one End	20	10	0
Quoins, Bullnose and 4½ in. Flats	16	10	0	Splays and Squints	18	0	0

Second Quality £1 per 1000 less than best.

	s.	d.	
Thames and Pit Sand	8	0	per yard, delivered.
Thames Ballast	6	9	" " "

Per ton, delivered.

	£	s.	d.		£	s.	d.
Best Portland Cement	2	4	0	..	2	8	0
Best Ground Blue Lias Lime	1	1	0	..	—		

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 15s. 6d. per yard delivered.
Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s.	d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1	7
Do. do. delivered in Railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1	8½
Do. do. delivered on road waggons, Nine Elms Depôt	1	9½
PORTLAND STONE—Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2	5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depôt, per ft. cube	2	6½
White Basebed, 2d. per ft. cube extra.		

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	11	Red Corsehill in blocks	2	6
Beer in blocks	1	7	Closeburn Red Freestone	2	2
Greenshill in blocks	2	0	Red Mansfield Freestone	2	6
Darley Dale in blocks	2	6			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto, ditto	3	2
3 in. sawn two sides slabs (random sizes)	1	0
2 in. to 2½ in. sawn one side slabs (random sizes)	0	8
1½ in. to 2 in. ditto, ditto	0	6½

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	9
6 in. rubbed two sides ditto	3	3
3 in. sawn two sides slabs (random sizes)	1	2½
2 in. self-faced random flags	0	6

TILES.

	Per 1000 f.o.r. London. £	s.	d.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	2	12	6
Ornamental ditto	2	15	0
Hip and valley tiles (per dozen)	0	5	6

SLATES.

	Per 1000 of 1200 f.o.r. London. £	s.	d.
Best Blue Bangor slates, 20 by 10	11	5	0
First quality " "	11	0	0
" " 16 by 8	5	10	0
Best Blue Portmadoc, 20 by 10	11	2	6
First quality " "	10	12	6
" " 16 by 8	5	10	0

WOOD.

BEST BUILDING REDWOOD.

Imported sizes.	Per standard. £	s.	d.		£	s.	d.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in.	22	0	0	..	23	0	0
3 in. by 9 in., 2½ in. by 9 in. and 2 in. by 9 in.	21	10	0	..	22	10	0

WOOD (*Continued*).

BEST BUILDING REDWOOD.	Per standard. £	s.	d.		£	s.	d.
Battens: 2 in., 2½ in., and 3 in. by 8 in.	20	0	0	..	20	10	0
2 in., 2½ in., and 3 in. by 7 in.	20	0	0	..	20	10	0
2 in., 2½ in., and 3 in. by 6 in.	19	10	0	..	20	0	0
2 in., 2½ in., and 3 in. by 5 in.	18	10	0	..	19	0	0
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in.	19	0	0	..	19	10	0
3 in. by 4 in., and 3 in. by 4½ in.	20	0	0	..	20	10	0
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in.	0	10	0	} more than			
¾ in.	1	0	0	} battens.			
Seconds: building quality deals, battens, boards, and scantlings	1	0	0	less than best.			
Best Middling Dantzic and Memel Fir Timber Logs (average specification)	Per load of 50 ft. cube. 7	10	0	..	—		
Seconds do. do.	7	0	0	..	—		
9 in. to 10 in. do.	6	10	0	..	—		
6 in. to 8 in. do.	6	0	0	..	—		
Stocks very limited.							
Sawn pitch pine logs (about 35 cu. ft. average)	Per load. 8	0	0	..	8	10	0
Do. 6 in. to 10 in.	6	5	0	..	6	10	0
Sawn Swedish Balks 4 in. by 4 in. to 6 in. by 7 in.	6	0	0	..	6	10	0
	Per standard.						
Best Pitch Pine Deals	34	0	0	..	35	0	0
Rio do.	23	0	0	..	25	0	0
Under 2 in. thick	0	10	0		extra.		

JOINERS' WOOD.

White Sea First Quality Red:							
4 in. by 11 in.	35	0	0	..	36	0	0
3 in. by 11 in., and 2 in. by 11 in.	34	0	0	..	35	0	0
4 in. by 9 in.	33	0	0	..	34	0	0
3 in. by 9 in., and 2½ in. by 9 in.	32	0	0	..	33	0	0
9 in. by 11 in. boards	1	0	0		more than deals.		
7 in. and 8 in. battens	24	0	0	..	25	0	0
7 in. and 8 in. boards	1	0	0		more than battens.		
Seconds quality	2	0	0		less than best.		
Third quality	£2 to £3				less than seconds.		
Archangel White Deals—							
Best 3 in. by 11 in.	28	0	0	..	29	0	0
3 in. by 9 in. and 10 in.	26	0	0	..	27	0	0
Seconds, do.	1	10	0		less than best.		
U.S. Battens	19	10	0	..	20	0	0
Prepared Floorings and Matchings, Seconds Swedish Red and equal—	Per square actual.						
1¼ in. by 7 in. planed and shot	1	4	0	..	1	5	0
1¼ in. by 7 in. planed and matched	1	4	6	..	1	5	0
1 in. by 7 in. planed and shot	0	19	0	..	1	0	0
1 in. by 7 in. planed and matched	0	19	6	..	1	0	6
⅝ in. by 7 in. planed, matched and beaded, or V jointed	0	15	0	..	0	16	0
1 in. by 7 in. do.	0	19	6	..	1	0	6
⅝ in. by 7 in. do.	0	12	6	..	0	13	0
6 in. at 6d. per square less than 7 in.							
5 in. and 5½ in. at 6d. per square less than 6 in.							
White Floorings at 6d. to 1s. per square less than Redwood.							
Columbian or Oregon Pine, best quality	Per standard. 28	0	0	..	29	0	0
Yellow Pine—First, regular sizes	57	0	0		upwards.		
Oddments	39	0	0		"		
Seconds, regular sizes	43	10	0		"		
Oddments	37	10	0		"		
Kauri Pine—Planks per ft. cube	0	7	6	..	—		
Oak Logs—							
Large, per ft. cube	0	6	0	..	0	6	6
Small " "	0	5	0	..	0	5	6
Wainscot Oak Logs, per ft. cube	0	10	6	..	0	12	6
Dry Wainscot Oak, per ft. super, as inch	0	1	0	..	0	1	3
¼ in. do. do.	0	0	10	..	0	1	0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0	1	0	..	0	1	4
Selected, Figury, per ft. super, as inch	0	1	6	..	0	2	6
Cuba Mahogany	0	1	6	..	0	2	6
Dry Walnut, American, per super, as inch	0	1	0	..	upwards. 0	1	3
French, "Italian," Walnut	0	1	0	..	0	1	6
Teak, per load (Rangoon or Moulmein)	28	0	0	..	34	0	0
Do. do. (Java)	25	0	0	..	27	0	0
American Whitewood planks, per ft. cube	0	6	6	..	0	7	6

METALS.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections, basis price	14	15	0	..	15	15	0
Plain Compound Girders, ordinary Sections	16	10	0	..	17	10	0
Plain Compound Stanchions	17	10	0	..	19	0	0
Angles, Tees, and Channels, ordinary sections	15	0	0	..	16	10	0
Flitch Plates	15	0	0	..	15	10	0
Cast Iron Columns and Stanchions, plain ordinary patterns	12	0	0	..	12	10	0

(Turning extra.)

METALS (*Continued*).

IRON—	Per ton, in London. £	s.	d.		£	s.	d.
Common Bars	14	0	0	..		—	
Staffordshire Crown Bars, good merchant quality	14	10	0	..	15	0	0
Staffordshire "Marked Bars"	15	0	0	..	15	10	0
Mild Steel Bars	14	10	0	..	15	0	0
Steel Bars, Ferro-Concrete quality, £15 10s. basis price.							
Hoop Iron, basis price	15	10	0	..		—	
" " Galvanised	28	0	0	..	30	0	0
(*And upwards, according to size and gauge.)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	14	10	0	..		—	
" " 24 g.	15	10	0	..		—	
" " 26 g.	17	0	0	..		—	
Sheet Iron, Galvanised flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	25	0	0	..		—	
Ordinary sizes to 22 g. and 24 g.	26	0	0	..		—	
Ordinary sizes to 26 g.	27	0	0	..		—	
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	27	0	0	..		—	
" " 22 g. and 24 g.	27	10	0	..		—	
Ordinary sizes to 26 g.	28	0	0	..		—	
Galvanised Corrugated Sheets—							
Ordinary sizes, 6 ft. to 8 ft. 20 g.	25	0	0	..		—	
Ordinary sizes, 22 g. & 24 g.	25	10	0	..		—	
Ordinary sizes, 26 g.	26	0	0	..		—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	17	0	0	..		—	
Best Soft Steel Sheets, 22 g. & 24 g.	17	10	0	..		—	
Best Soft Steel Sheets, 26 g.	19	0	0	..		—	
Cut Nails, 3 in. to 6 in.	16	0	0	..	16	10	0
(Under 3 in., usual trade extras.)							

LEAD, &c.

	Delivered in London. £	s.	d.		£	s.	d.
LEAD—Sheet, English, 4 lb. and up	33	10	0	..		—	
Pipe in coils	34	0	0	..		—	
Soil pipe	37	0	0	..		—	
Compo pipe	37	0	0	..		—	
NOTE—Country delivery 20s. per ton extra; lots under 5 cwt. 1s. per cwt. extra.							
COPPER—							
Strong Sheet ..... per lb.	0	1	5	..		—	
Thin "	0	1	6	..		—	
Copper nails ..... "	0	1	5	..		—	
Copper wire ..... "	0	1	5	..		—	
BRASS—							
Strong Sheet ..... "	0	1	3	..		—	
Thin "	0	1	4	..		—	
TIN—English Ingots	0	1	9	..		—	
SOLDER—Plumbers'	0	0	9	..		—	
Tinmen's	0	0	11	..		—	
Blowpipe	0	1	1	..		—	

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. thirds	5½d.	32 oz. thirds	8½d.
21 oz. thirds	6½d.	" fourths	7½d.
" fourths	5½d.	Fluted Sheet, 15 oz.	5½d.
26 oz. thirds	7d.	" 21 oz.	6½d.
" fourths	6½d.		

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	3½d.
⅜ Rough rolled and rough cast plate	4½d.
½ Rough rolled and rough cast plate	4½d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	4½d.
Ditto, tinted	6½d.
Rolled Sheet	3½d.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	11
" " " in barrels	"	0	3	0
" " " in drums	"	0	3	3
Boiled " " in barrels	"	0	3	2
" " " in drums	"	0	3	6
Turpentine in barrels	"	0	3	9
" in drums	"	0	4	0
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		41	10	0
Red Lead, Dry	per ton	42	10	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0
GENUINE WHITE LEAD PAINT—"Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	52	0	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	6

FOREIGN AND COLONIAL.

Construction Material for Pier and Customs Buildings, Dominican Republic.

H.M. Chargé d'Affaires at Santo Domingo (Mr. G. A. Fisher) reports, under date November 5, that the construction of a concrete pier, 1,130 ft. in length, and Customs buildings, is projected at Puerto Plata. Tenders will be called for after the scheme has been approved by Congress (which was to have met on November 20). A large quantity of galvanised-iron sheeting, as well as steel doors, etc., will be required in connection with the proposed Customs buildings. A plan of the Customs buildings may be inspected by United Kingdom manufacturers and contractors interested at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 2 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless the amount of the Tender is stated.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BROMLEY (Kent).—For the supply of granite to the Rural District Council :—
Mountsorrel Granite Co., Ltd.* £204 10

CHURWELL (Yorks).—For the erection of three-stall stable, harness-room, etc., at Churwell, for Mrs. Stanhope. Mr. T. A. Buttery, architect and surveyor, Queen-street, Morley :—
A. Hartley, Fountain-street, Morley* £299 5

CHURWELL.—Accepted for erecting five through houses, Granny-avenue, for Sir Chas. Scarth, J.P. Mr. T. A. Buttery, architect, Morley and Leeds :—

Masons, including street forming, etc.: Pearson & Ainsworth, Britannia-road, Morley	£746	7	8
Joiner: I. Newton, Ackroyd-street, Morley	369	3	4
Plumber: F. Hargreaves, Elland-road, Churwell	128	6	8
Plasterers: J. Iredale & Son, Bradford-road, Birstall	70	0	0
Slater: G. Rogerson, Bank Top, Morley	66	13	4
Painter: C. Habergham, Commercial-street, Morley	24	3	4
Fixtures: F. Verity & Sons, The Calls, Leeds	42	7	1

FAREHAM.—For the construction of a new road along the top of the cliff at Hill Head, Crofton, for the Fareham Rural District Council. Mr. J. F. Whitear, surveyor, 16, Southampton-road, Fareham :—

J. Croad	£1,280
Franks, Harris Bros., Ltd.	1,200
Grounds & Newton	950
T. W. Pedrette, Bush Hill-park, Enfield*	685

DARTFORD.—For the erection of seventy-two houses in Burnham-road, Dartford, for the Urban District Council :—
Perry & Co. (Bow), Ltd.* £21,564

GLOUCESTER.—For providing and laying 6-in. and 4-in water-mains, for the City Council. Mr. R. Read, City Surveyor :—
Hobrough & Co.† £2,648
† Recommended for acceptance.

HOLLINGBOURNE.—For the supply of broken ragstone to the Rural District Council :—
Bridge, Maidstone* ..... 7s. per yard

LONDON.—Accepted by the Metropolitan Water Board for the supply of the following materials :—

Battersea (Renewal of Stock).

(*a*) ¾-in. screw-down stopcocks for wiped joints; (*b*) ¾-in. screw-down stop-ferrules for wiped joints [949], Woodhouse & Co., Ltd., £487 10s.

1½-in. screw-down stop-ferrules for wiped joints [949], Woodhouse & Co., Ltd., £108.

Kent (Overy-street).

Lengths of mild steel chimney, unpainted [949], F. Braby & Co., Ltd., £25.

Battersea (Central Buildings).

(*a*) White deal, 12 ft. and up; (*b*) 1½-in. poling boards; (*c*) 2-in. poling boards [1,112], W. W. Howard Bros. & Co., £20 per standard, £20 15s. per standard, £20 per standard (£40 7s. 6d. approx.).

Battersea.

3-in. by 9-in. Swedish yellow deals, King & Scarborough, £46.

Battersea (Renewal of Stock).

No. 12 gauge zinc, Grey & Marten, Ltd., £38 (approx.).

Richmond-Twickenham Tunnel.

Mild steel bolts of varying dimensions: 10 in. diam. by 5 in. hex. rd. hex. bolts, nuts, and washers; 1 in. diam. studs 1¾ in. long [885], Bayliss, Jones, & Bayliss, Ltd., £26.

Hornsey.

Bright thirds Swedish yellow deals, King & Scarborough, £35 (approx.).

ST. HELENS.—For the erection of an engine-house and other works at the Cropper's Hill power-station, St. Helens, for the Electricity Committee. Mr. E. M. Hollingsworth, Borough Electrical Engineer, Town Hall, St. Helens :—

Bywater & Sons	£1,935
D. A. Ablett & Son	1,852
Elliott & Forbes	1,679
J. Pilkington	1,663
F. Warburton	1,650
C. J. Middlehurst	1,641
J. Yearsley, St. Helens*	1,560

LONDON.—For extension of washing shed, etc., at the Mead Ambulance Station, for the Metropolitan Asylums Board :—

J. W. Trudgett	£310	0	0
W. Willett	295	0	0
J. Elliman	285	0	0
London, Provincial, and Export Building Co.	275	0	0
Battley, Sons, & Holness	275	0	0
Lole & Co.	248	0	0
L. Lown	240	0	0
T. Millman	232	0	0
W. J. Maddison	207	0	0
R. J. Truscott	197	7	6
T. Bendon, Ltd.	197	0	0
H. J. Edgar	189	0	0
W. Hussey	180	0	0
W. King & Son	178	0	0
A. H. Inns	168	0	0
C. H. Boyd & Sons, 6, Dyers-buildings, London, E.C.†	152	0	0

† Recommended for acceptance.

PRESTWICH.—For the construction of a 12-in. pipe sewer in King's-road, from Bury New-road to Colchester-avenue, for the Urban District Council. Mr. William F. Pinfold, Deputy Surveyor. Quantities by Deputy Surveyor :—

A. & T. Hyslop Maston Brick Co.	£436	5	0	C. Collins & Co.	£227	18	9
W. Jowell	315	0	0	W. Snape & Sons	221	16	6
W. Turner & Co.	290	0	0	P. Hayes & Sons	203	14	0
E. B. Jones	280	10	6	J. Horrocks, West Houghton*	178	13	6
T. Wilson	256	12	0				
M. L. Glover	250	15	0				
	247	17	0				

ST. COLUMB.—For erecting a boundary wall and foundations at the site for the Isolation Hospital, near Enniswortgey, St. Columb, for the St. Columb Rural District Council :—
W. H. Bailey* £46 10

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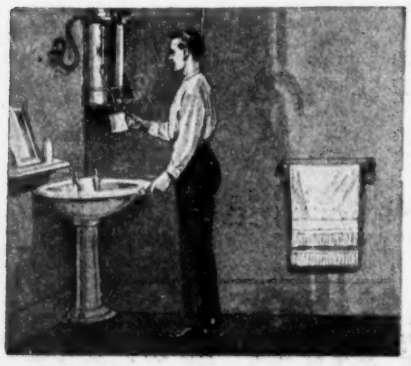
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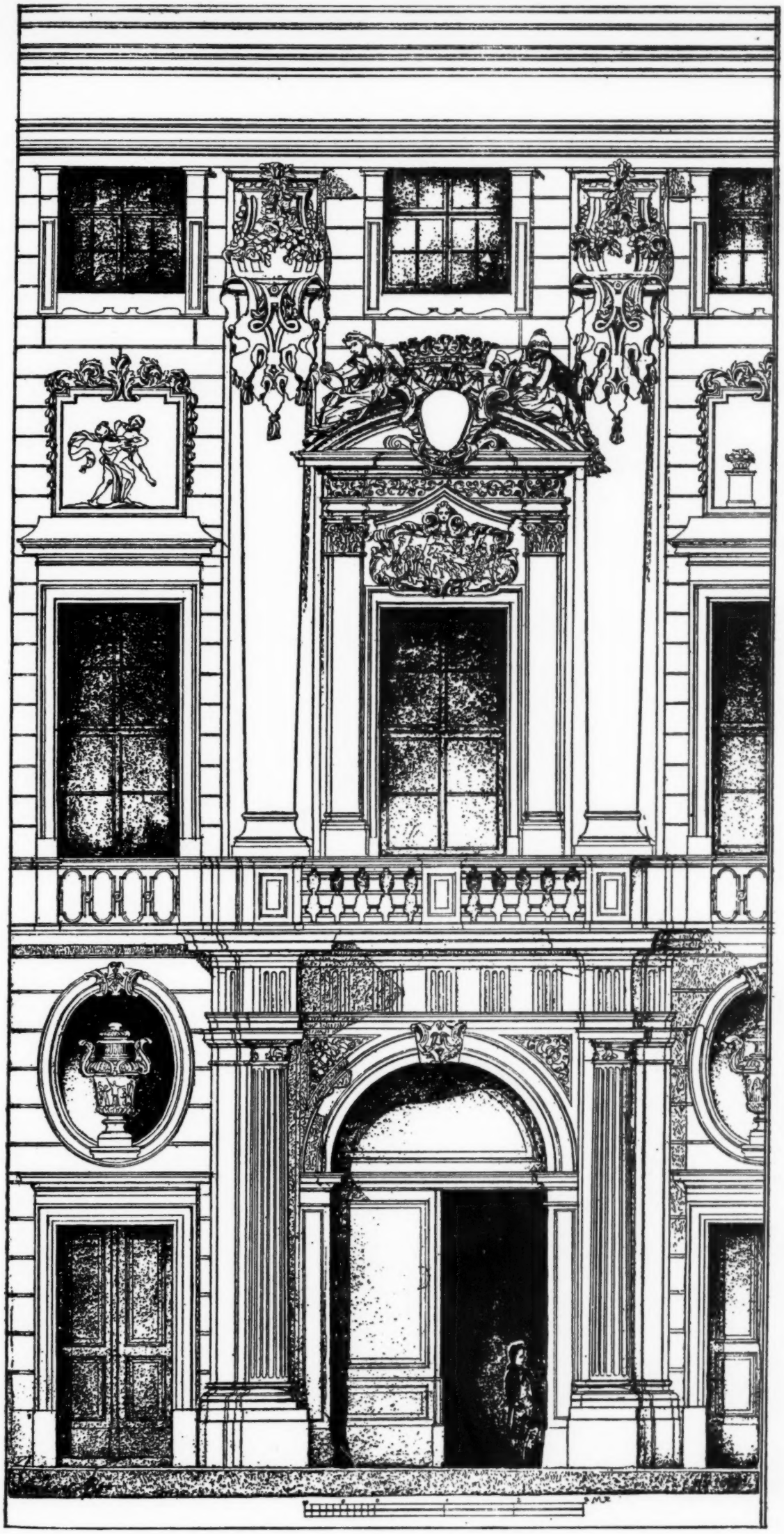
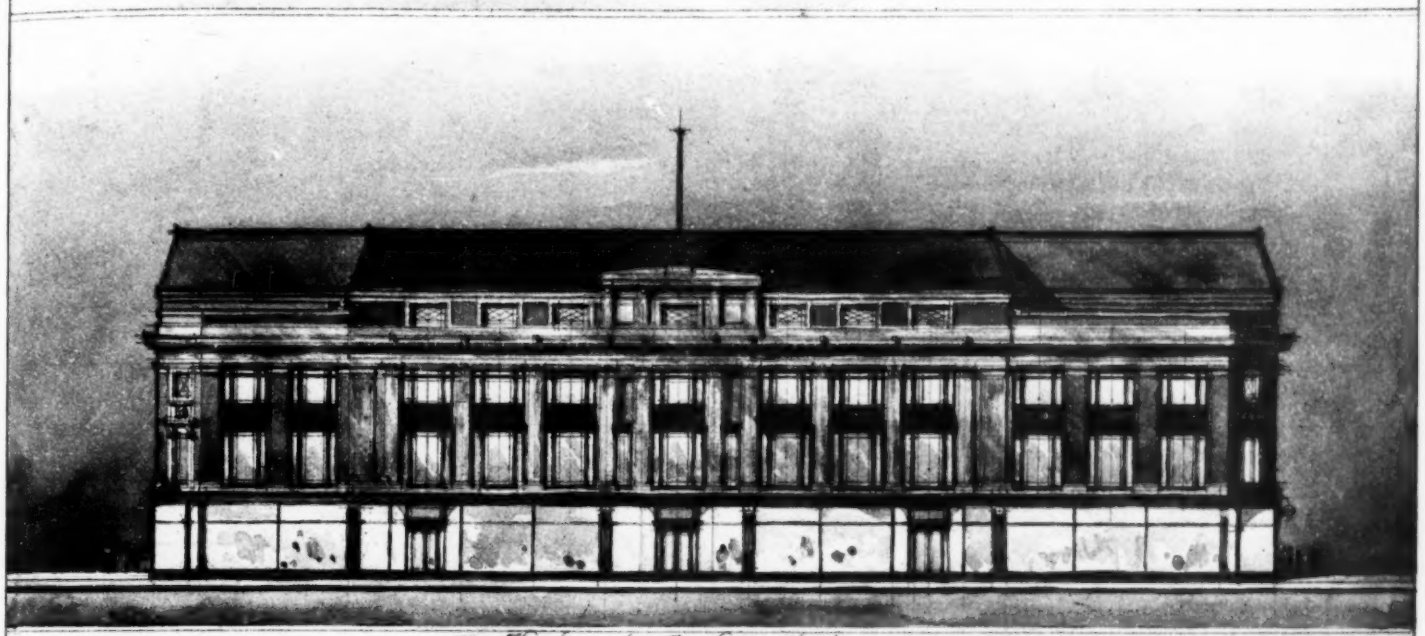
DOORWAY OF A HOUSE IN SCHWERTGASSE, VIENNE.



VIENNESE BAROQUE ARCHITECTURE: DETAIL OF A STREET FRONT.

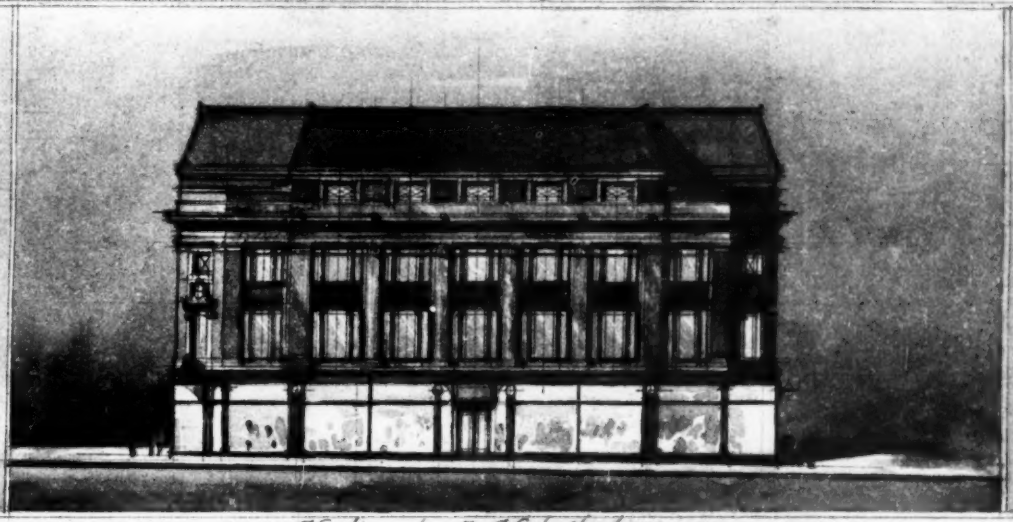
PLYMOUTH CO-OPERATIVE SOCIETY. *Proposed Business Premises*



Elevation to Courtenay Street

MATERIALS:

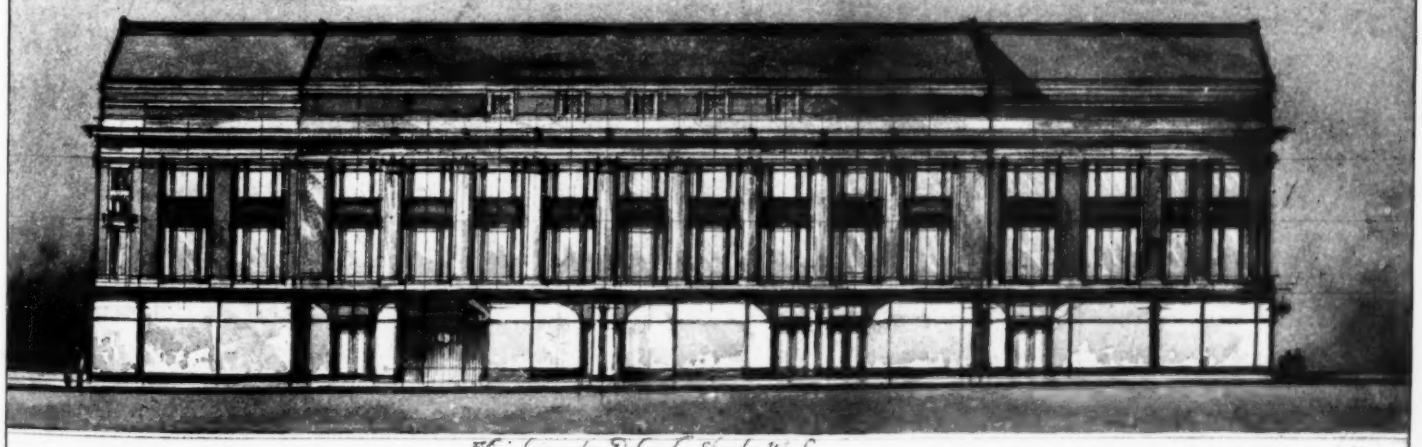
Portland Stone; Red Ruabon Bricks & Green Delabole Slates. The First & Second floor window frames of "Expanded" cast iron, the shop fronts of polished Bronze.



NOTE:

In order to avoid the ugly gables that the building is supported upon the steel frame construction, the latter is advanced about 9" in front of the superstructure, thus appearing as a screen before the actual supports of the Building from Ground.

Elevation to Frankfort Street.



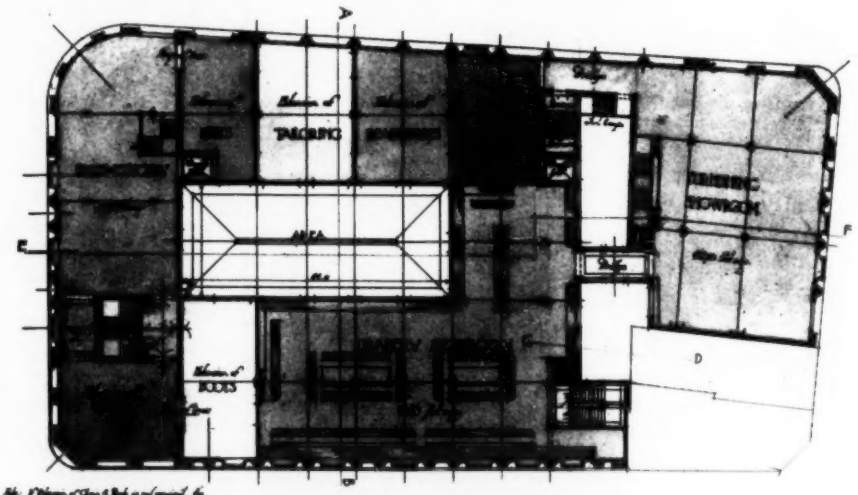
Elevation to Raleigh Street West.

THE ELEVATIONS ON THIS DRAWING SHOW THE COMPLETED BUILDING.

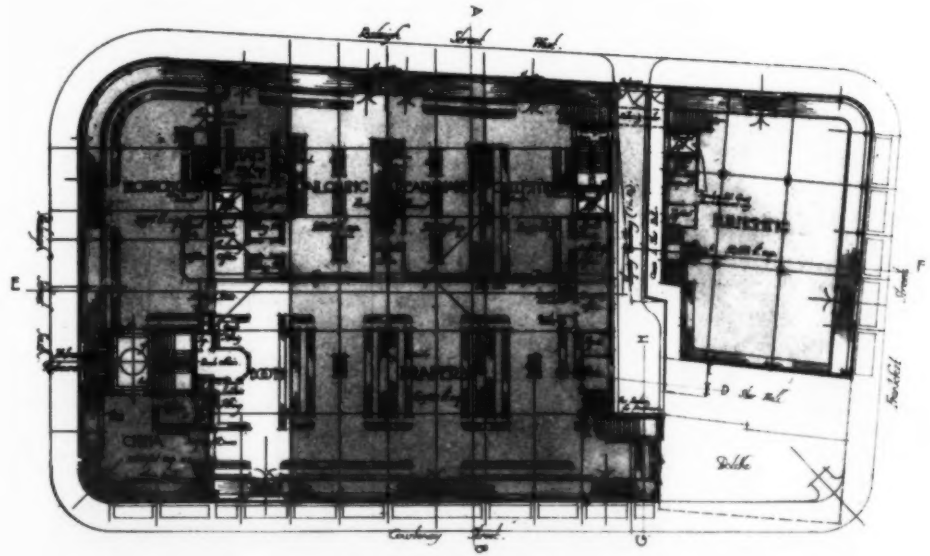
FIRST PREMIATED DESIGN, BY MESSRS. HALLIDAY & PATERSON AND C. G. AGATE.

PLYMOUTH CO-OPERATIVE SOCIETY.

Proposed Business Premises.



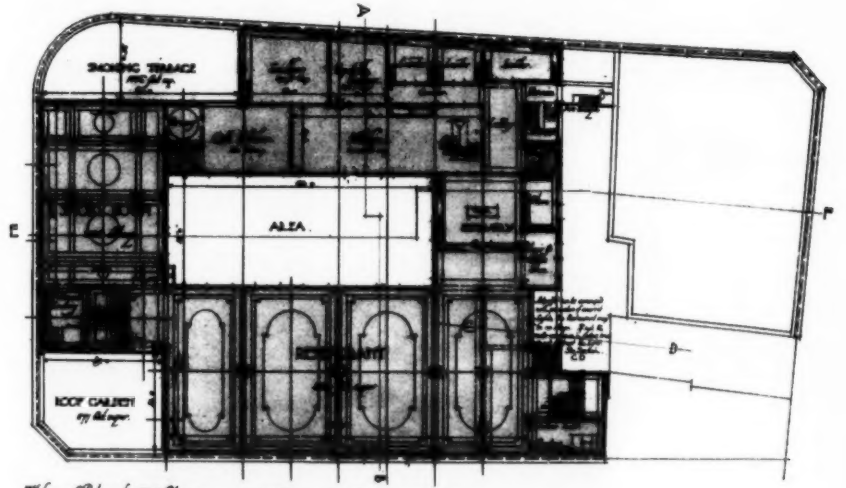
· FIRST · FLOOR · PLAN ·



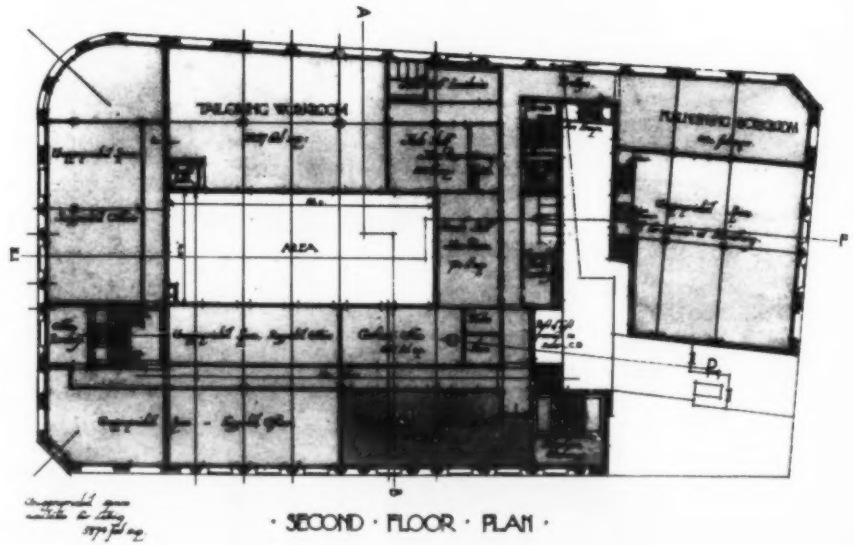
· GROUND · FLOOR · PLAN ·

PLYMOUTH CO-OPERATIVE SOCIETY.

Proposed Business Premises

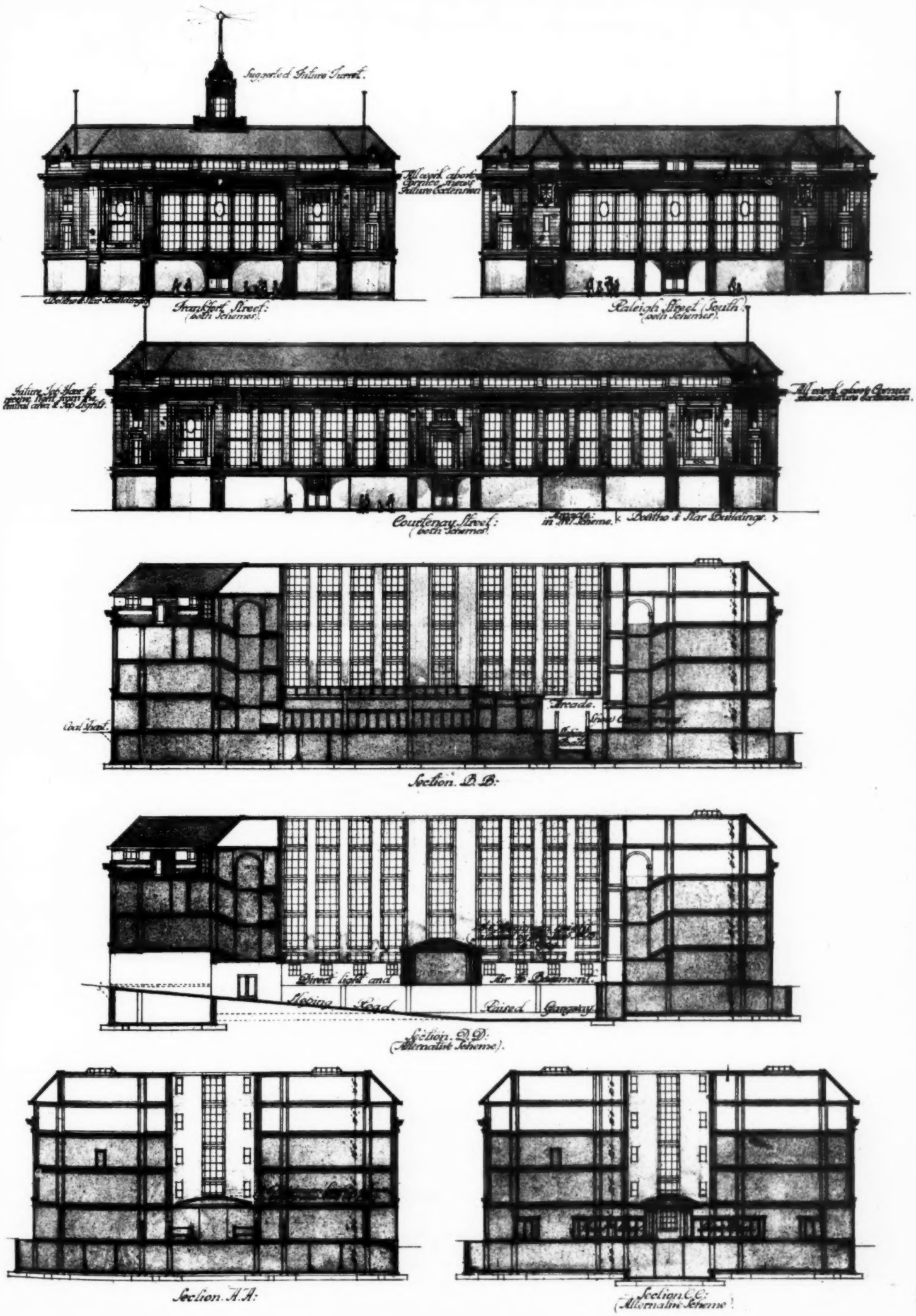


THIRD · FLOOR · PLAN.

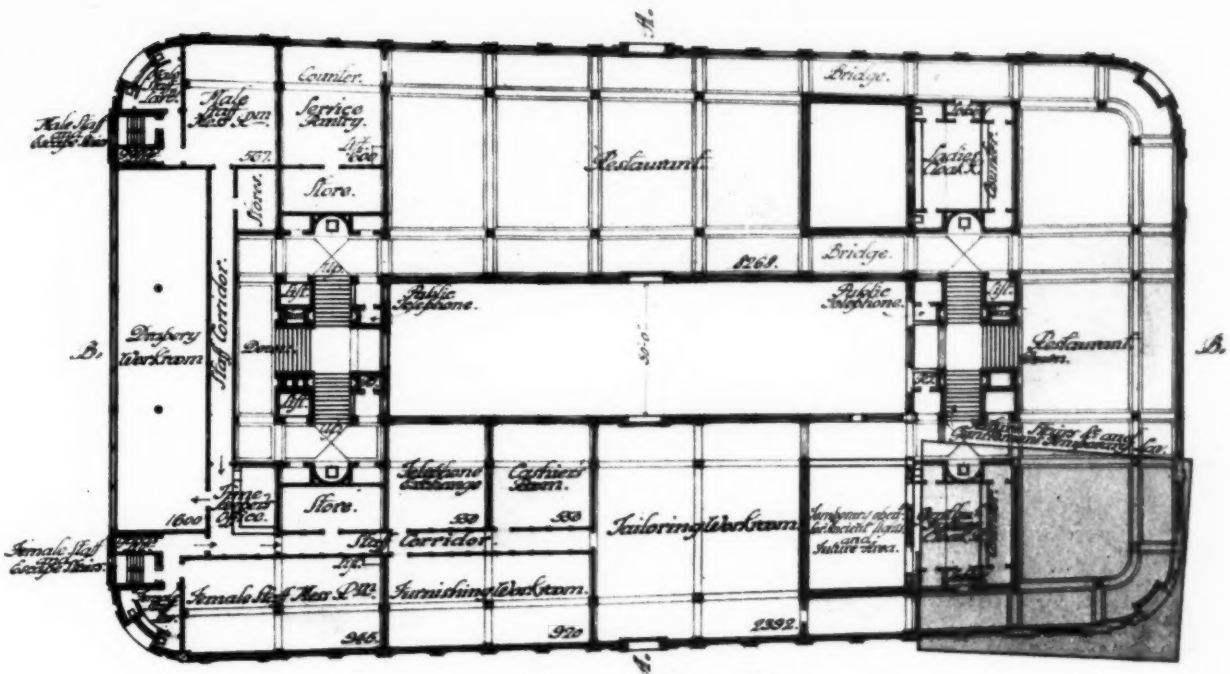


· SECOND · FLOOR · PLAN ·

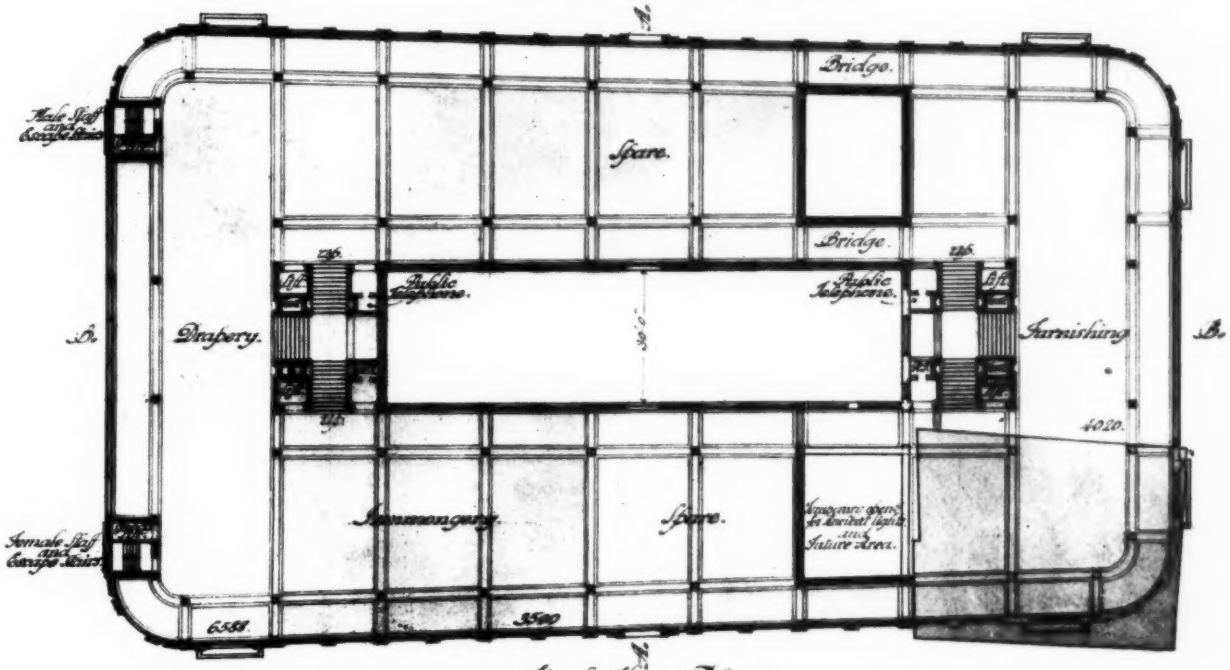
FIRST PREMIATED DESIGN, BY MESSRS. HALLIDAY & PATERSON AND C. G. AGATE.



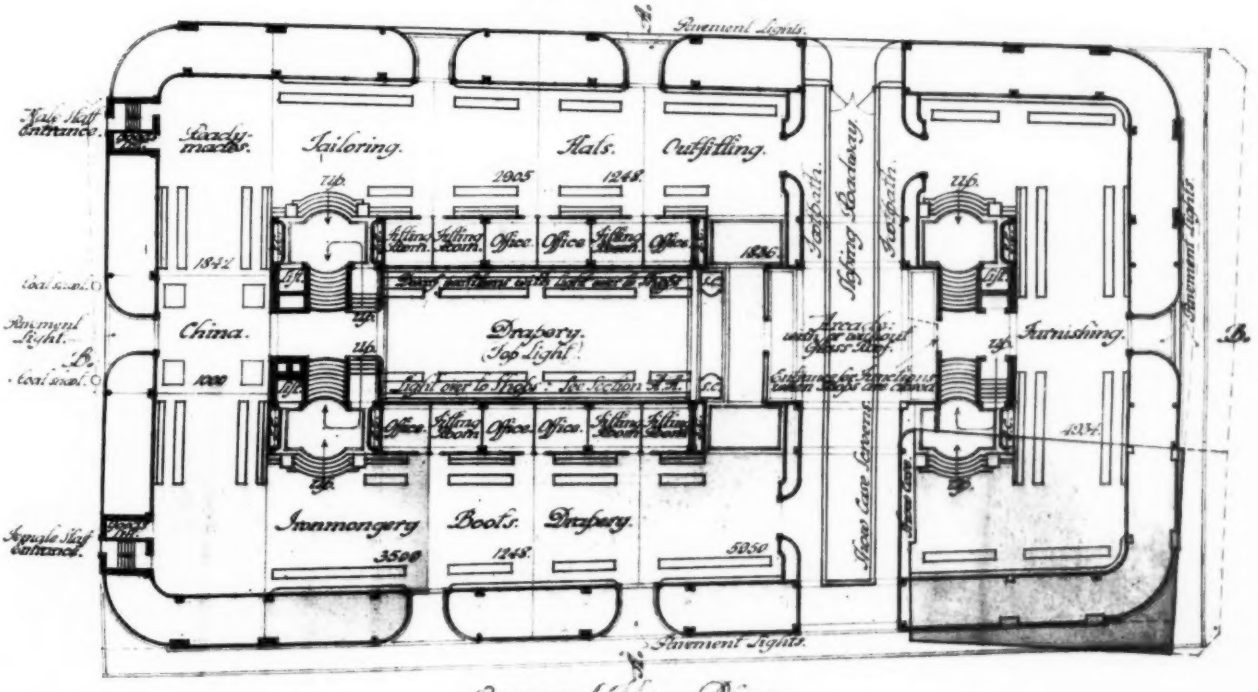
PLYMOUTH CO-OPERATIVE SOCIETY'S PROPOSED NEW PREMISES.—SECOND PREMIATED DESIGN, BY MR. H. R. GARDNER.



Second Floor Plan.



First Floor Plan.

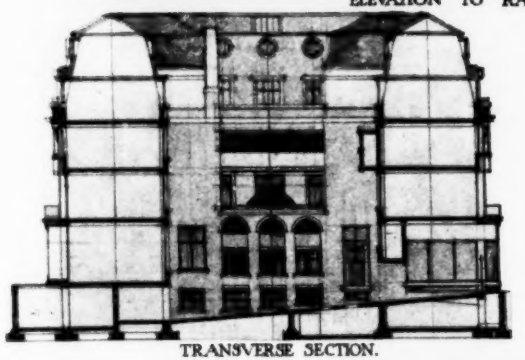


Ground Floor Plan.

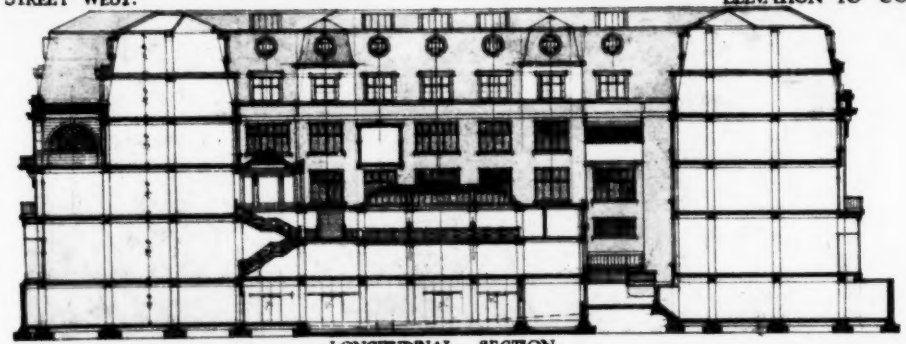
PLYMOUTH CO-OPERATIVE SOCIETY'S PROPOSED NEW PREMISES.—SECOND PREMIATED DESIGN, BY MR. H. R. GARDNER.

ELEVATION TO RALEIGH STREET WEST.

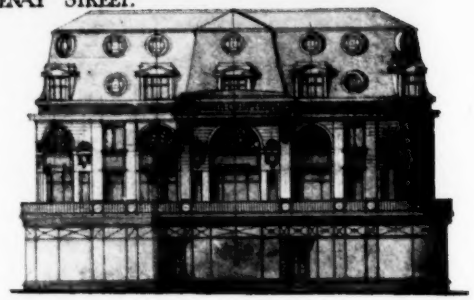
ELEVATION TO COURTENAY STREET.



TRANSVERSE SECTION.

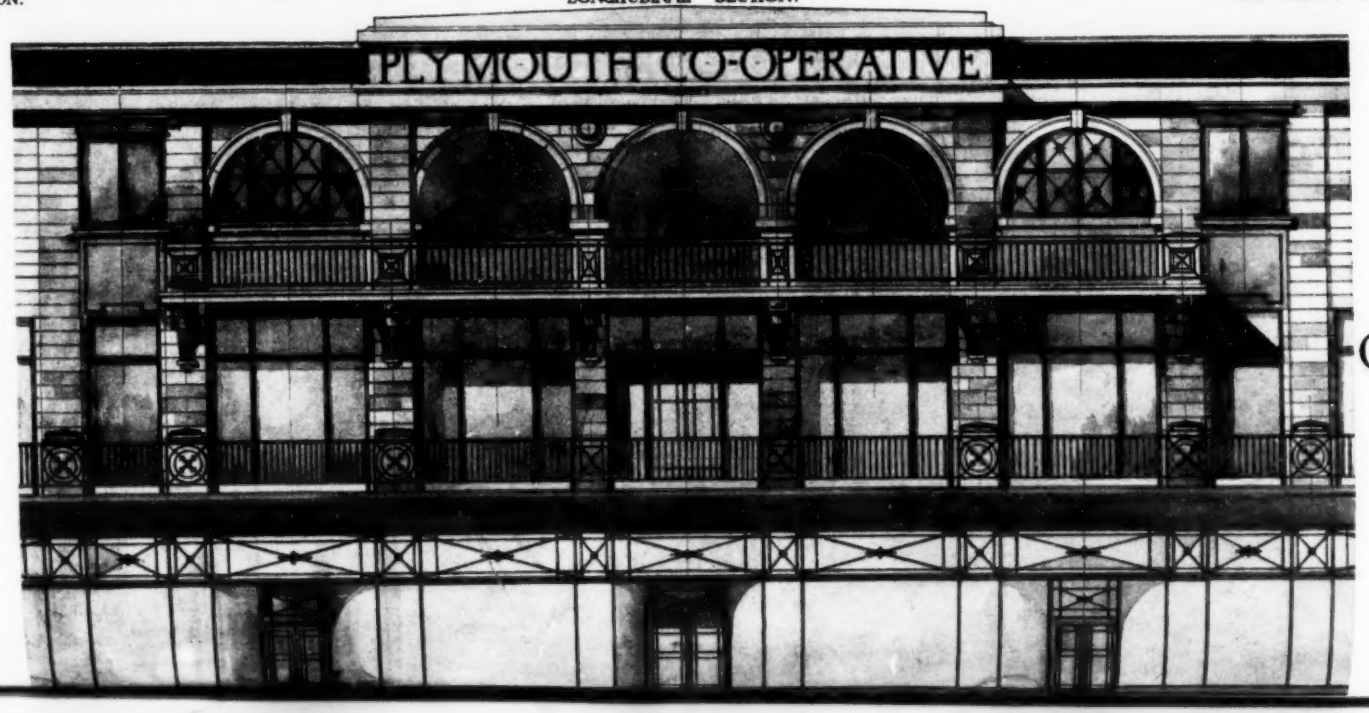


LONGITUDINAL SECTION.

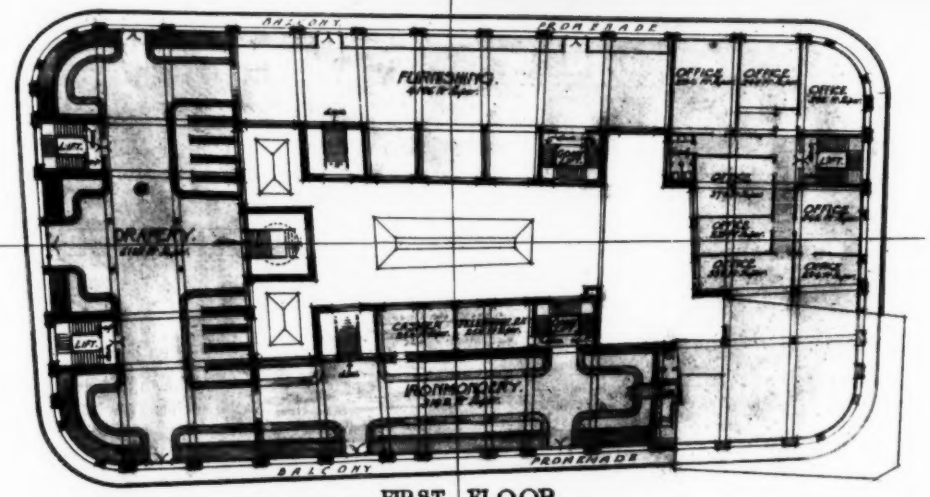


ELEVATION TO FRANKFORT STREET.

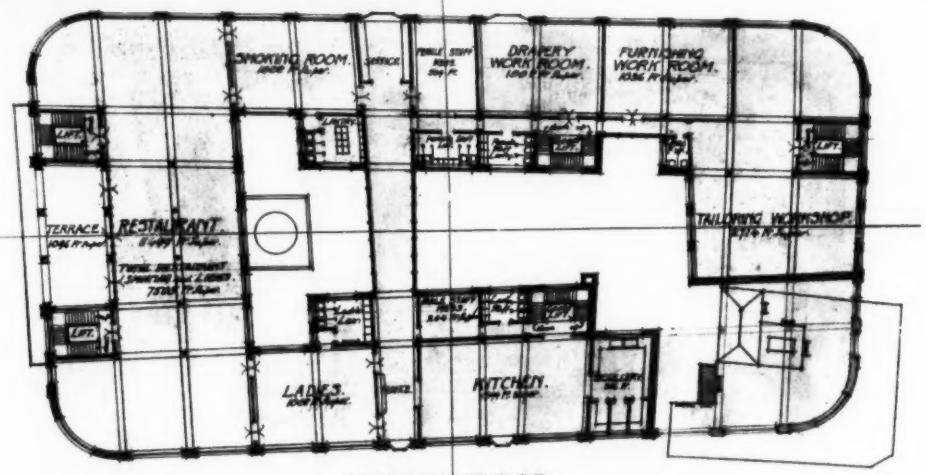
PROPOSED BUSINESS PREMISES. *for the*



PLYMOUTH MUTUAL CO-OPERATIVE SOCIETY.



FIRST FLOOR.

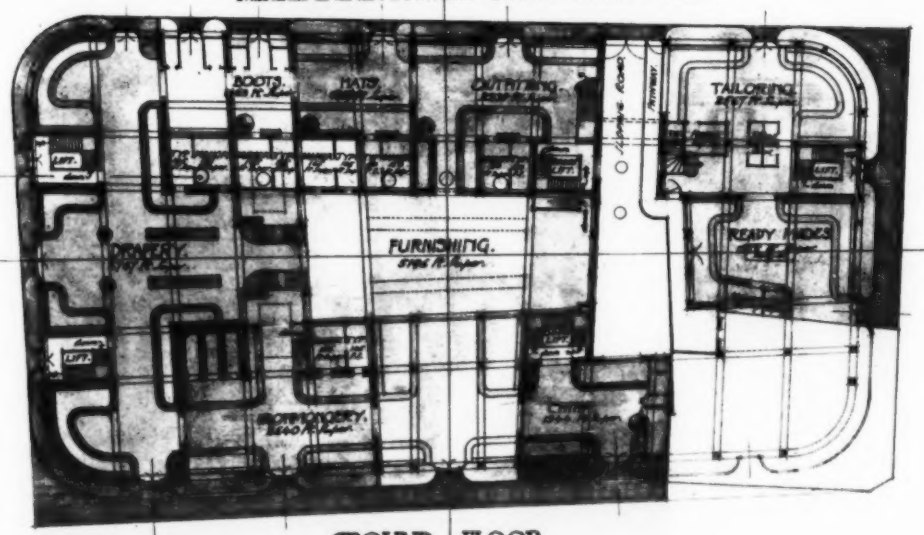


SECOND FLOOR.

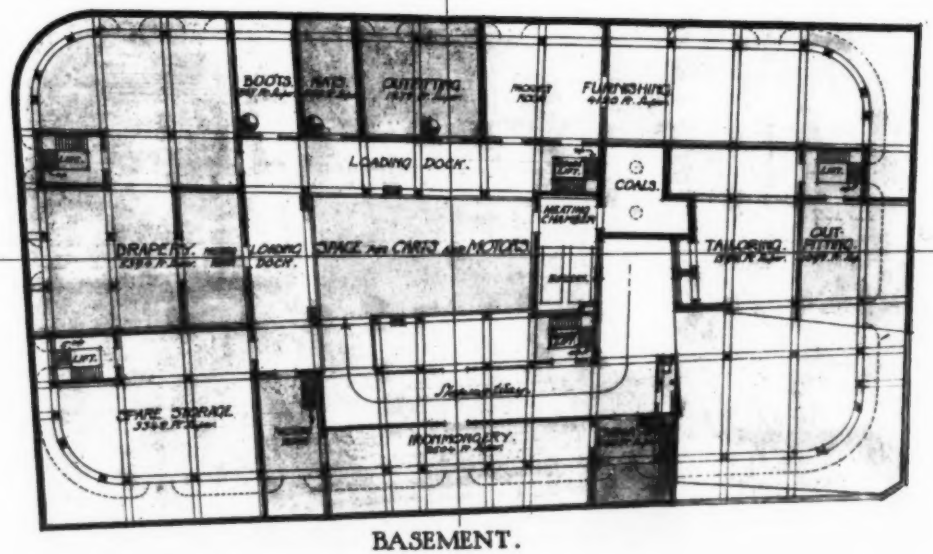
NOTE. The counters, screens and Fittings shown on these plans are only suggestive and can be re-arranged as may be desired by the tenders.

MEZZANINE. BETWEEN GROUND AND FIRST FLOOR.

PROPOSED BUSINESS PREMISES *for the* PLYMOUTH CO-OPERATIVE SOCIETY.



GROUND FLOOR.



BASEMENT.

THIRD PREMIATED DESIGN, BY MR. H. S. EAST.